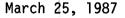
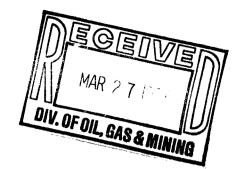
LONE MOUNTAIN PRODUCTION COMPANY

P.O. BOX 3394 408 PETROLEUM BUILDING BILLINGS, MONTANA 59 103-3394 (406) 245-5077





State of Utah Division of Oil, Gas & Mining 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203

Attention:

Ron Firth, Associate Director

Division of Oil, Gas & Mining

Dear Ron:

Enclosed for your approval is an APD for our Quinoco State No. 16-12 well (in triplicate). Attached to the APD are Designation of Operator forms. We hope to drill the well in early May, so your expedient approval is appreciated.

If you have any questions or comments, please feel free to give me a call.

Very truly yours,

LONE MOUNTAIN PRODUCTION COMPANY

JGR/1w

Enclosures

xc - Ken Currey

Form 3160-3 (November 1983) (formerly 9-331C)

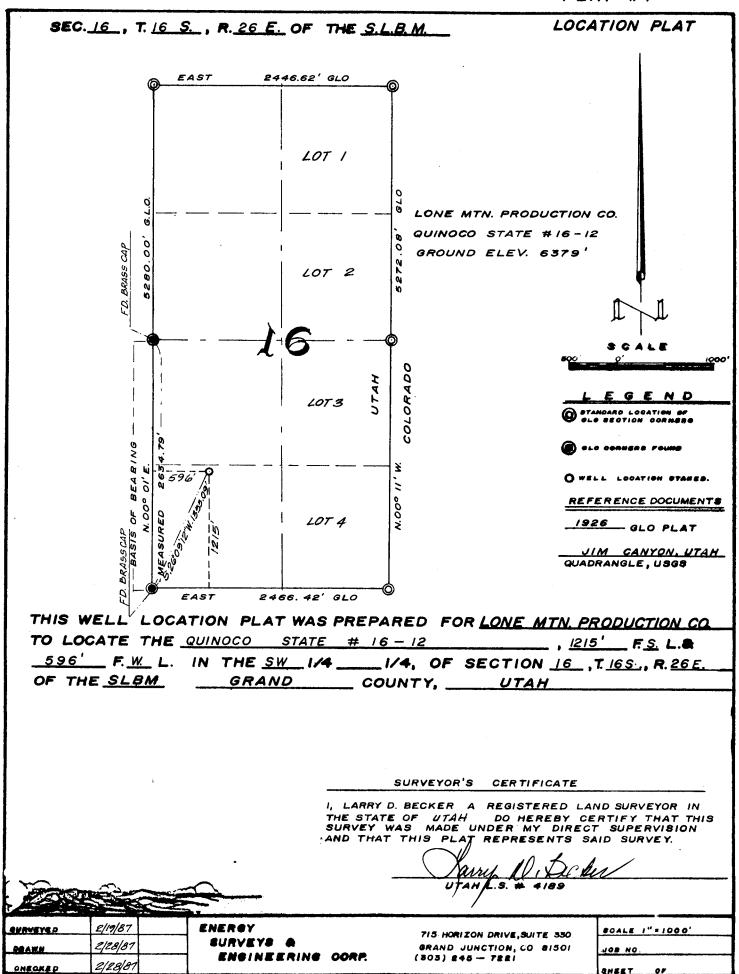
UNITED STATES

SUBMIT IN TRACCATE (Other instructions on reverse side)

Form approved. Budget Bureau No. 1004-Expires August 31, 1985

DEPARTMENT OF THE INTERIOR

		ML-29608					
APPLICATION	6. IF INDIAN, ALLOTTEE OR TRIBE NAME						
1a. TYPE OF WORK			7. UNIT AGREEMENT NAME				
b. Tipe of Well	ILL [A]	DEEPEN [PLUG BA			
	VELL X OTHER			NGLE MULTIP	LI	8. FARM OR LEASE NAME	
2. NAME OF OPERATOR		State					
	<u>Mountain Produc</u>	tion Company	/			9. WELL NO. Quinoco	
3. ADDRESS OF OPERATOR						State No. 16-12 10. FIELD AND POOL, OR WILDCAT	
P.O. Box 339	94, 408 Petrole	um Bldg., B	$M_{\rm L}$	BIENE DANGE	<u> </u>	. /	
4. LOCATION OF WELL (R At surface	seport location clearly and	d in accordance wa		A Routenant ()		✓ San Arroyo	
1215'	FSL, 596' FWL;	Section 16		1445 6 - 60		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	
At proposed prod. son			$1/\Lambda$	MAR 27 []		SWa SWa Section 16:	
14 DISTANCE IN MILES	AND DIRECTION FROM NEA	PRET TOWN OF PO	1111		U	TI6S - R26E 12. COUNTY OF PARISH 13. STATE	
	les northwest o				MO		
15. DISTANCE FROM PROPO		r mack, com		OF YORREST THERE	II. NO.	OF ACRES ASSIGNED	
PROPERTY OR LEASE I	LINE, FT.	596'		297.76	TO T	149.18 (S ¹ / ₂ Sec. 16	
(Also to nearest drig 18. DISTANCE FROM PROF	g. unit line, if any)		19. PH	OPOSED DEPTH	20. ROTA	RY OR CABLE TOOLS	
TO NEAREST WELL, D OR APPLIED FOR, ON TH	RILLING, COMPLETED, 2	559'		5310'(Morrison)		otary	
21. ELEVATIONS (Show who	ether DF, RT, GR, etc.)	<u> </u>				22. APPROX. DATE WORK WILL START*	
6379'	GL; 6390' KB					May 1, 1987	
23.	:	PROPOSED CASIN	G ANI	CEMENTING PROGRA	M/		
SIZE OF HOLE	BIZE OF CABING	WEIGHT PER FO	OT	SETTING DEPTH	1	QUANTITY OF CEMENT	
12-1/4"	9-5/8" New	32.3# H-40S	TC	200'	150 s	acks Class G to surface.	
8-3/4"	7" New	20# J-55		1640'		acks Class G.	
6-1/4"	4-1/2"`New	11.6# K-55		5310'	175 s	acks 10-0 RFC.	
	1				J		
	formation is the						
		rkers are:	CASI	LEGATE-1340';	DAKOTA	SILT-4810'; DAKOTA-4875'	
MORRISON- 3. Gas is ar		ha Dakata an	d Ma	wwison formati	N		
	cipated. Minor					o oil or other minerals	
	casing program				ופ ויופטמ	verue.	
					Plan	and Schematic of	
						e drilling out from	
under sur	rface and inter	mediate casi	ng a	nd checked dail	V.	c a	
						and intermediate hole	
	ater is encounte	ered. If wa	ter	is encountered,	chemi	cal-gel type mud will	
be used. The well will be air drilled from under intermediate casing to total depth.							
(continued on Page 2, attached)							
				baab <i></i>		matter was and waspered new washing	
in above space describe sone. If proposal is to preventer program, if an	drill or deepen directions	proposal is to deep ally, give pertinent	data o	n subsurface locations as	nd measure	luctive sone and proposed new productive d and true vertical depths. Give blowout	
24.	. 0	-					
BIGNED James G.	-D-Phylon ROULSON	TIT	Р	etroleum Engine	er	March 25, 1987	
· -	ral or State office use)			ARRA	VPD =	1/ 71/10/0	
PERMIT NO. 4:	3-019-312	43		APPROVAL DATE -		Y THE STATE	
PERMIT NO.		·	_	OF U		IVISION OF	
APPROVED BY		TIT	.e	OIL, (<u> SAS, A</u>	ND MINING	
CONDITIONS OF APPROV	AL, IF ANY:			DATE:	9-21	-87	
				(pv. //		R	



- 7. Auxiliary equipment: See Well Control Plan.
- 8. The logging program will consist of a DIL log from total depth to base of intermediate casing, and GR-FDC-CNL logs from total depth to above the Frontier. No cores or drill stem tests are planned.
- 9. No abnormal pressures or temperatures are anticipated. No poisonous gas is anticipated.
- 10. Anticipated spud date is May 1, 1987. Completion operations should commence within 30 days of rig release.
- 11. Survey plats are attached.
- 12. The gas is dedicated to Southwest Gas Corporation.
- 13. Designation of Operator from Quinoco Petroleum, Inc. to Lone Mountain Production Company is attached.

WELL CONTROL PLAN

- Surface Casing: 9-5/8" O.D., 32.3 #/ft., L.S., Short T&C, set at 200' or deeper, cemented with pump and plug method back to the surface or bottom of cellar.
- 2. Casinghead Flange: 9-5/8" x 10"-900 series casinghead with two 2"- 2000 psi L.P. outlets.
- 3. Intermediate Casing: 7", 20#, L.S., set at 1640' and cemented with sacks.
- 4. Blowout Preventor: A 10" 3000 psig W.P. double gate hydraulic shaffer BOP (or equivalent) with drillpipe rams and blind rams. All fill, kill and choke lines will be minimum of 2" 2000 psi W.P. A Grant rotating head will be used while air and mist drilling. A new rubber will be installed prior to drilling through the Dakota. BOP's will be worked daily. Blind rams will be checked during trips. BOP's will be tested to 1000 psi prior to drilling shoe joint on surface casing and intermediate casing.
- 5. Auxiliary Equipment: (a) Drill pipe floats will be allowed at contractor's discretion. (b) Visual monitoring of air returns will be maintained. (c) Upper kelly cock will be used. (d) Stabbing valve will be kept on floor.
- 6. Anticipated bottom hole pressure is less than 1000 psi at 4875 or a gradient of .205 psi/ft or less. No abnormal temperatures or hydrogen sulfide gas are anticipated.

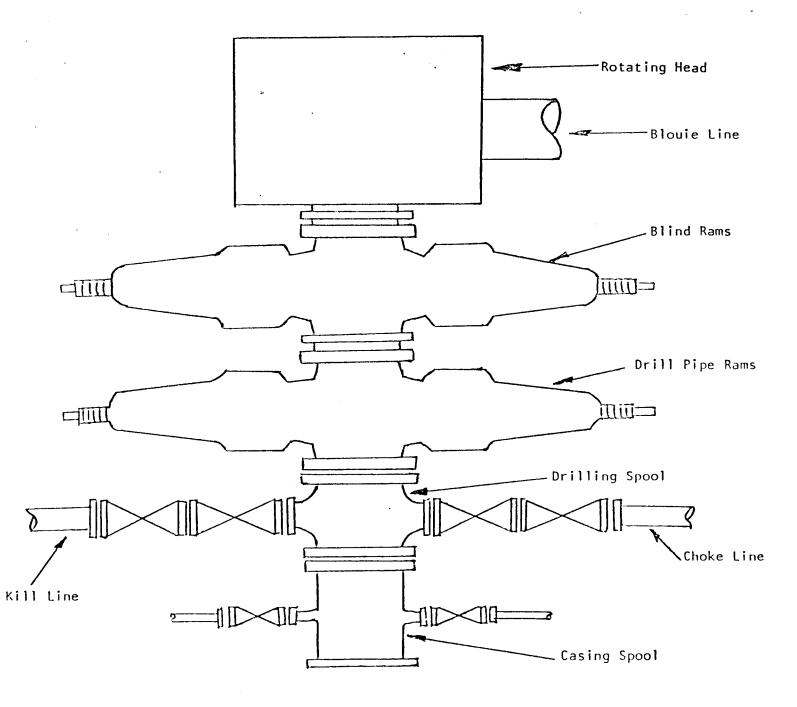
LONE MOUNTAIN PRODUCTION COMPANY

James - Konton

Bv:

James G. Routson Petroleum Engineer Air drilled wells using 900 series wellhead equipment.

Interval from 200' to total depth.



SURFACE USE PLAN

Lone Mountain Production Company Quinoco State No. 16-12 SW⅓ SW⅓ Section 16: T16S - R26E Grand County, Utah

1. EXISTING ROADS

See Maps #1, #2 and Plat #1. This proposed well is about 16 miles northwest of Mack, Colorado. It is reached by going west of Mack on Old Highway 6 & 50 to Mesa County road 8, then up 8 road to "S" road, then west on "S" road to the Baxter Pass road up to the Prairie Canyon Road. Then go northwest up the Prairie Canyon Road about 7 miles to the Cottonwood Canyon Road. Then go west about 3 miles on the Cottonwood Canyon Road up the hill to the ridge top to the beginning of the one mile of new road.

2. ACCESS ROADS TO BE CONSTRUCTED

See Map #1. The 1.0 mile of new road will be constructed so that it has an 18-foot wide running surface. Turnouts will be constructed where topography permits.

The road will follow the ridge line for a short distance and then descend through a rim and follow a bench and ridge line around the hill to the well pad.

Water will be diverted from and across the road utilizing water dips. No culverts are planned.

The road will have a maximum grade of 8 percent.

3. LOCATION OF EXISTING WELLS

See Map #3. There are 4 producing wells, and 1 dry hole within 1 mile of the proposed location in Utah. There are also 2 producing wells in Colorado no shown on the map located within 1 mile of the proposed location.

4. LOCATION OF PRODUCTION FACILITIES

- A) On Well Pad. See Plat #4. (Paint everything dark green).
- B) Off Well Pad. See Map #1.

Lone Mountain Production Company proposes to construct approximately 4000' of 3" surface steel pipeline from this well to a gas sales point near the center of Section 21, Township 16 South, Range 26 East.

5. LOCATION AND TYPE OF WATER SUPPLY

The water source for this well is West Salt Creek. The pickup point is on Old Highway 6 & 50 about 2.5 miles west of Mack, Colorado. The water will be hauled over the well access road.

6. SOURCE OF CONSTRUCTION MATERIALS

No construction materials will be used other than native materials. Soil from cuts will be used in fills. No outside material will be brought in.

7. METHODS FOR HANDLING WASTE DISPOSAL

Cuttings will be buried in the reserve pit at clean up. Garbage and other waste material will be contained in a trash cage. This cage will be dumped at an approved sanitary land fill. Human waste will be disposed of in chemically treated sanitary pits.

Drilling fluids will be contained in the reserve pit and left to evaporate. Any fluids produced during testing operations will be collected in a test tank. If a test tank is not available, the fluids will be contained in the reserve pit. Any spills of oil, gas, salt water or noxious fluid will be cleaned up and removed.

If the well is productive, produced water will be disposed of on site for 30 days only, or 90 days with the permission of the State Petroleum Engineer. After that time, application will be made for approval of permanent disposal method in compliance with the rules and regulations of the State of Utah.

8. ANCILLARY FACILITIES

No ancillary facilities are planned.

9. WELLSITE LAYOUT

- See Plat #2 Pit and Pad Layout
- See Plat #2A Cross Sections of Pit and Pad
- See Plat #3 Rig Layout

The location will be constructed large enough to accommodate the drilling rig and associated equipment with allowance made for future completion and fracturing equipment.

The location construction will begin by stripping and stockpiling all available (4-6") topsoil. The stockpile will be along the south sides of the location.

The reserve pit will be constructed along the north side of the well pad. The pit will be fenced on three sides during drilling and closed on the

Surface Use Plan - Page 3

fourth side at rig release. The fence will be maintained through completion and while the pit area is drying.

10. PLANS FOR RECLAMATION OF THE SURFACE

If the well is productive, the reserve pit will be allowed to dry and then backfilled. All of the area not necessary for production will be resloped, covered with available topsoil and revegetated using a seed formula supplied by the State of Utah.

If the well is abandoned, the entire area of disturbance will be returned to a reasonable contour approximating the topography of the surrounding area. The topsoil will be distributed over the recontoured area and revegetated using the appropriate seed formula.

Clean-up will begin after completion rig release and resloping should begin by the Fall of 1987.

11. SURFACE OWNERSHIP

Lands involving new construction are both federal and state. A BLM road right-of-way has been applied for.

12. OTHER INFORMATION

The vegetation is sparse and includes juniper, sagebrush, western wheatgrass, Indian rice grass and a few annual plants.

A cultural resource survey of the area is being done and the report will be filed with the State of Utah and the BLM in Moab, Utah.

13. LESSEE'S OR OPERATOR'S REPRESENTATIVES AND CERTIFICATION

James G. Routson

LONE MOUNTAIN PRODUCTION COMPANY Office Phone: (406) 245-5077

P. O. Box 3394

Billings, MT 59103 Home Phone: (406) 245-8797

Ken Currey

Field Consultant Office/Home Phone: (303) 858-3257

P. O. Box 1491

Fruita, CO 81521 Mobile Phone: (303) 245-3660, Unit 6258

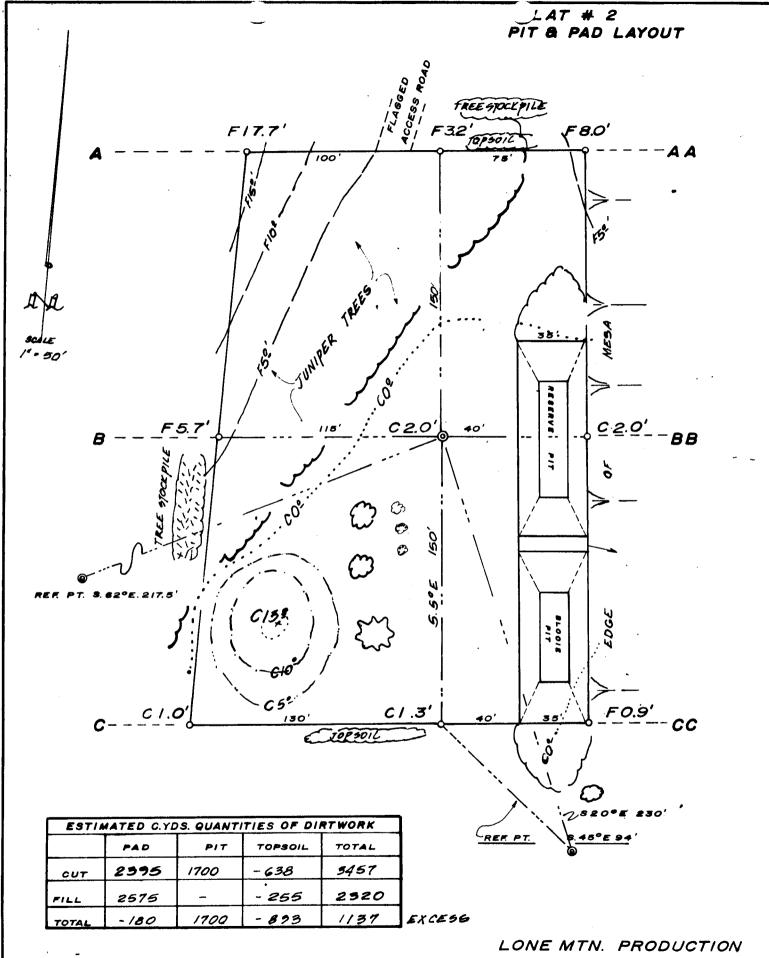
I hereby certify that I, or persons under my supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best

Surface Use Plan - Page 4

of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Lone Mountain Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

March 25, 1987

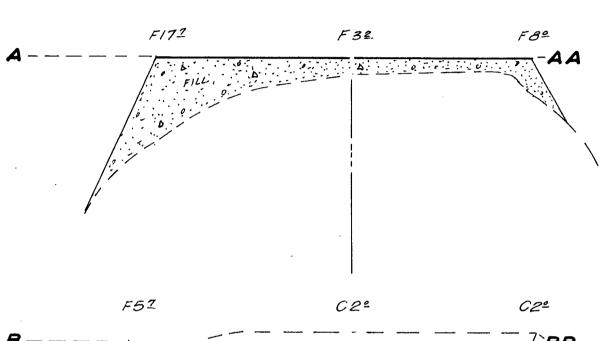
James G. Routson

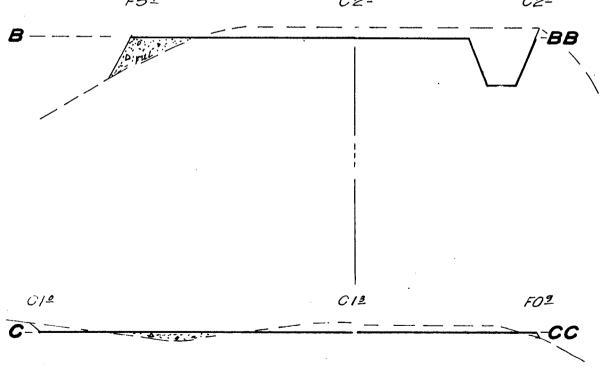


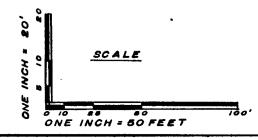
QUINOCO STATE # 16 - 12

PREPARED BY ENERGY SURVEYS & ENGINEERING GRAND JUNCTION, COLORADO

CROSS SECTIONS

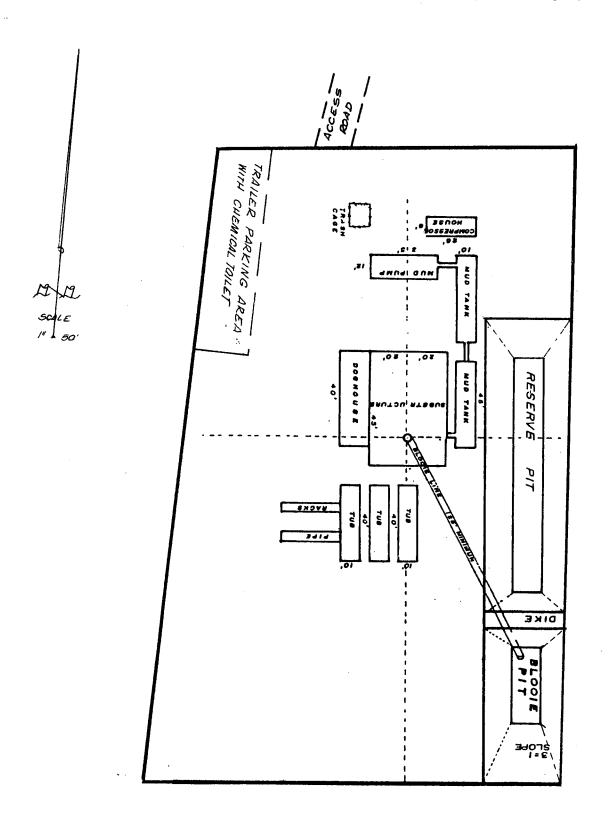




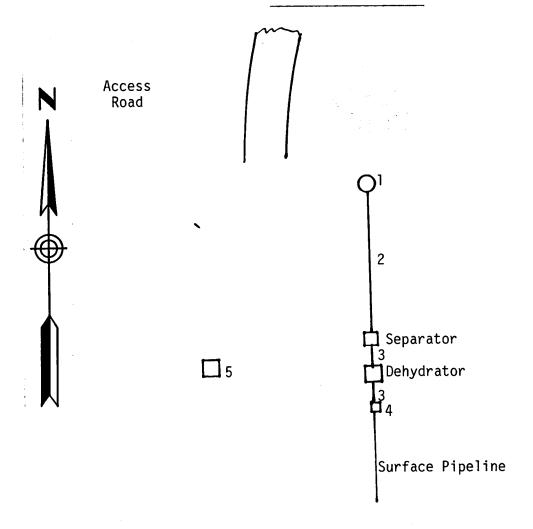


LONE MOUNTAIN PRODUCTION
QUINOCO STATE # 16-12

PREPARED BY ENERGY SURVEYS & ENGINEERING CORR



LONE MOUNTAIN PRODUCTION CO. QUINOCO STATE # 16 - 12



- 1. Wellhead will be a 6"-900 series flanged top. Tubing head will be 10"-900 x 6"-3000 psi with two 2" 3000 psi flanged valves. Tree will be 2" screwed x 2000 psi W.P.
- Line between wellhead and separator will be approximately 100 feet in length and constructed of 2-3/8" .218 wall seamless, welded, wrapped and buried approximately 5 feet deep.
- 3. Line between separator and meter will be 2-3/8" OD seamless, .218 wall, welded, coated, wrapped and buried, and will be approximately 25 feet in length.
- 4. Meter run will be American 2" run, or equivalent, 1000 psi static rating, 100" of water differential rating.
- 5. Pit, if necessary, will be 10' x 10', enclosed by dikes and fenced.

DESIGNATION OF OPERATOR

State of Utah
The undersigned is, on the records of the waxexpectage waxexpectage, holder of lease

DISTRICT LAND OFFICE: Divi

ML 29608

Division of Oil, Gas & Mining

.

SERIAL NO.:

and hereby designates

NAME:

Lone Mountain Production Company

ADDRESS:

408 Petroleum Building, P. O. Box 3394, Billings, Montana 59103

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 16 South, Range 26 East

Section 16: Lots I thru 4, WaWa (All)

Containing 297.76 acres, more or less Grand County, Utah

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

E. M. NOMINEE PARTNERSHIP COMPANY, By QUINOCO ENERGY, INC. as Managing General Partner

Rv

Jerry D. Webb, Senior Vice President-Operations

March 11, 1987

(Date)

P. O. Box 378111, Denver, CO 80237

(Address)

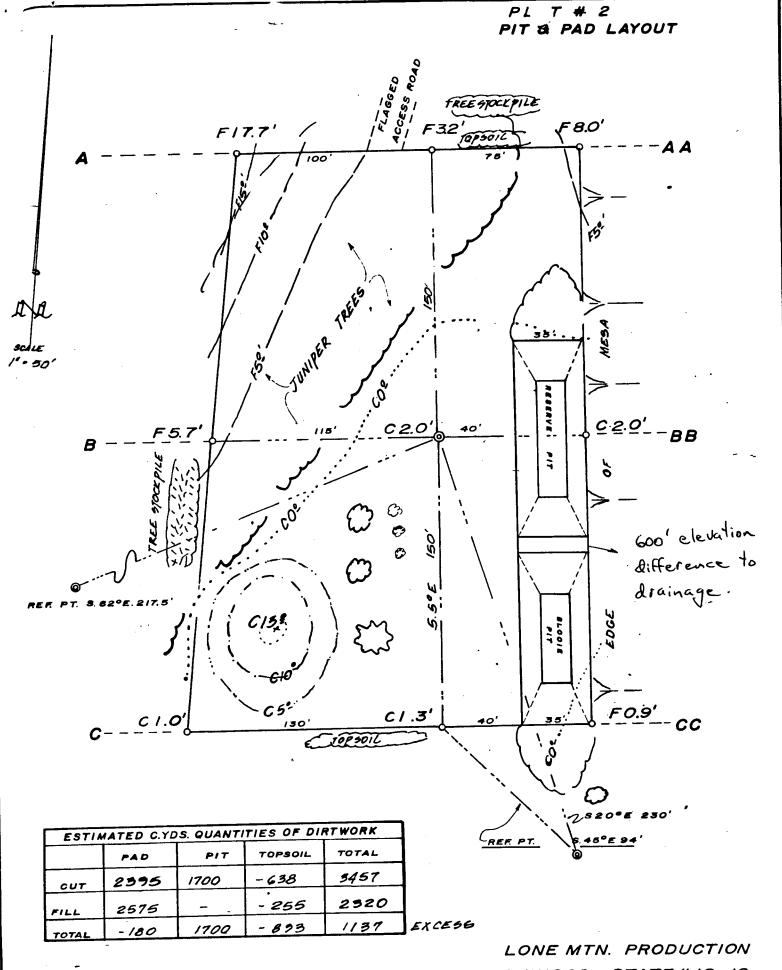
U. S. LOVERNMENT PRINTING OFFICE IN -- SARIA

DRILLING LOCATION ASSESSMENT State of Utah Division of Oil, Gas & Mining

OPERATOR: Lone Mountain Production Co. WELL NAME: Quinoco State #16-12
QTR/QTR: SW/SW SECTION: 16 TWP: 16 S RANGE: 26 E
COUNTY: Grand FIELD: San Arroyo 1215' FS L 596' FW L
SFC OWNER: State of Utah LEASE #: ML-29608
SPACING: 500' F SECTION LINE F QTR/QTR LINE 2000' F ANOTHER WFL.
INSPECTOR: Ed Deputy DATE & TIME: April 15, 1987; 9:00 AM
PARTICIPANTS: Ken Currey (Lone Mountain) & Bill Buniger (Dirt Contractor)
REGIONAL SETTING/TOPOGRAPHY: Colorado Plateau, South Book Cliffs; location is on a
ridgetop with steep slopes to the east & west.
LAND USE
CURRENT SURFACE USE: Summer cattle & sheep grazing.
and a process of the
PROPOSED SURFACE DISTURBANCE: Drill pad, including reserve & blooie pits well be approx. 200' X 300', access road will be 1 mile long from existing road, along ridgetop and
side slope.
AFFECTED FLOODPLAINS AND/OR WETLANDS: None
FLORA/FAUNA: Juniper, pine, sagebrush, native grasses, cactus. Deer, small birds,
possible eagle & coyote in vicinity.
ENVIRONMENTAL PARAMETERS
GEOLOGY
SOIL TYPE AND CHARACTERISTICS: Light brown, silty to sandy clays, moderate
permeability, not much soil cover - bedrock near surface.
SURFACE FORMATION & CHARACTERISTICS: Mesaverde Fm, light brown, fine grained, silty
sandstone - massive to moderate bedded, moderate permeability.
04,100,001,000,000,000,000,000,000,000,0

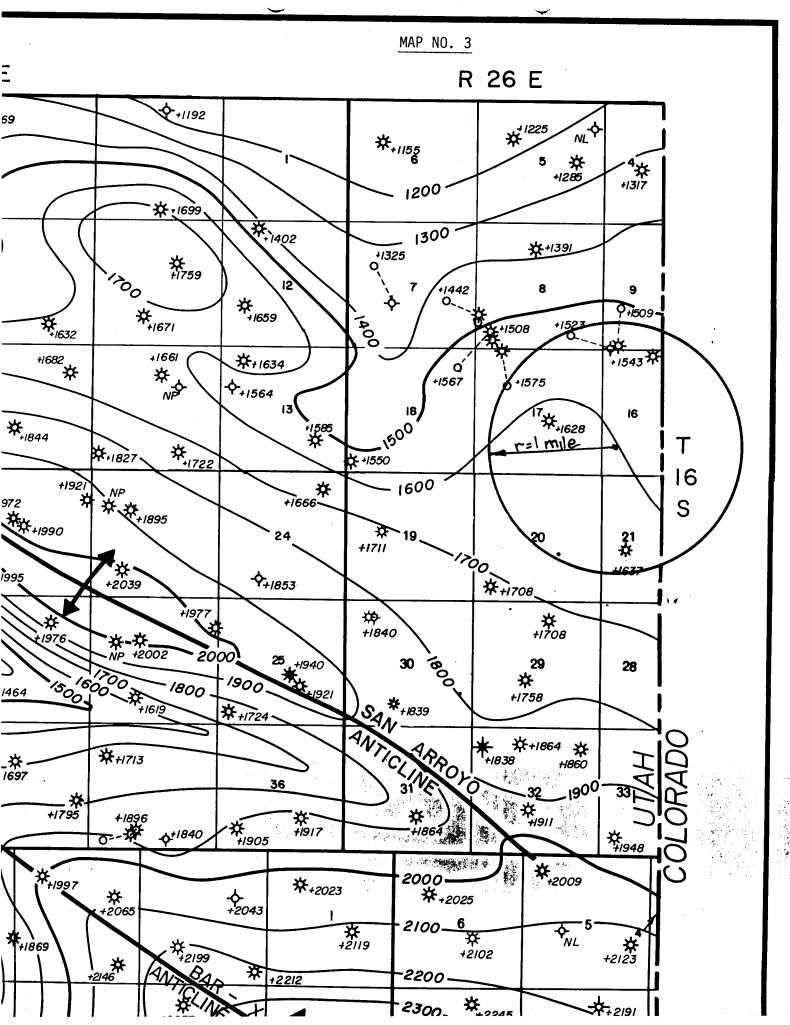
EROSION/SEDIMENTATION/STABILITY: Stable location, bedrock near surface, location is
on ridgetop - not affected by slides, some rain & wind erosion.
SUBSURFACE GEOLOGY
OBJECTIVE(S)/DEPTH(S): Morrison Fm at 5310 depth.
ABNORMAL PRESSURES - HIGH AND LOW: None anticipated - bottom hole pressure
expected to be less than 1000 psi at 4875'.
CULTURAL RESOURCES/ARCHAEOLOGY: Carl Connor, Grand River Institute, Grand Junction, Co.
WATER RESOURCES: No drainages through location, water drains off ridgetop and down steep
slopes to drainages on east and west sides of ridge.
RESERVE PIT
CHARACTERISTICS: Reserve & blooie pits will be on east side of location, total of 35' wide,
200' long, & 10' to 15' deep, constructed in cut material on edge of steep slope.
LINING: Possible bentonite or plastic.
MUD PROGRAM: Will be air or mist drilled - if water is encountered will use chemical-gel
mud.
DRILLING WATER SUPPLY: West Salt Creek in Colorado.
OTHER OBSERVATIONS: Location is on ridgetop with reserve & blooie pits in bedrock about
10' from steep slope and a 600 vertical foot drop to the drainage below. Lone Mtn.
would like to move gas sales meter off location to Sec. 21 with purchase meter - this
location is more accessible in the winter.
STIPULATIONS FOR APD APPROVAL: This office shall receive notice within 48 hours of
completing construction of drill site and prior to placing fluids in reserve pit.
Compressing construction of an arms of the construction of the con

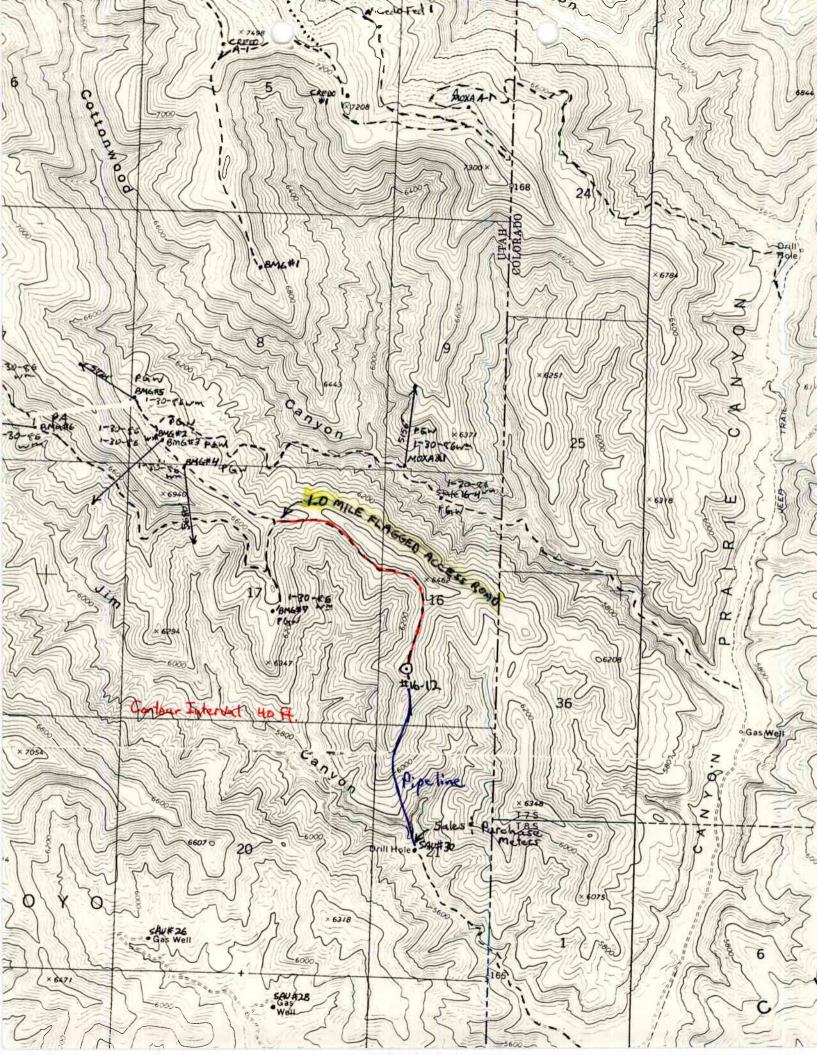
ATTACHMENTS

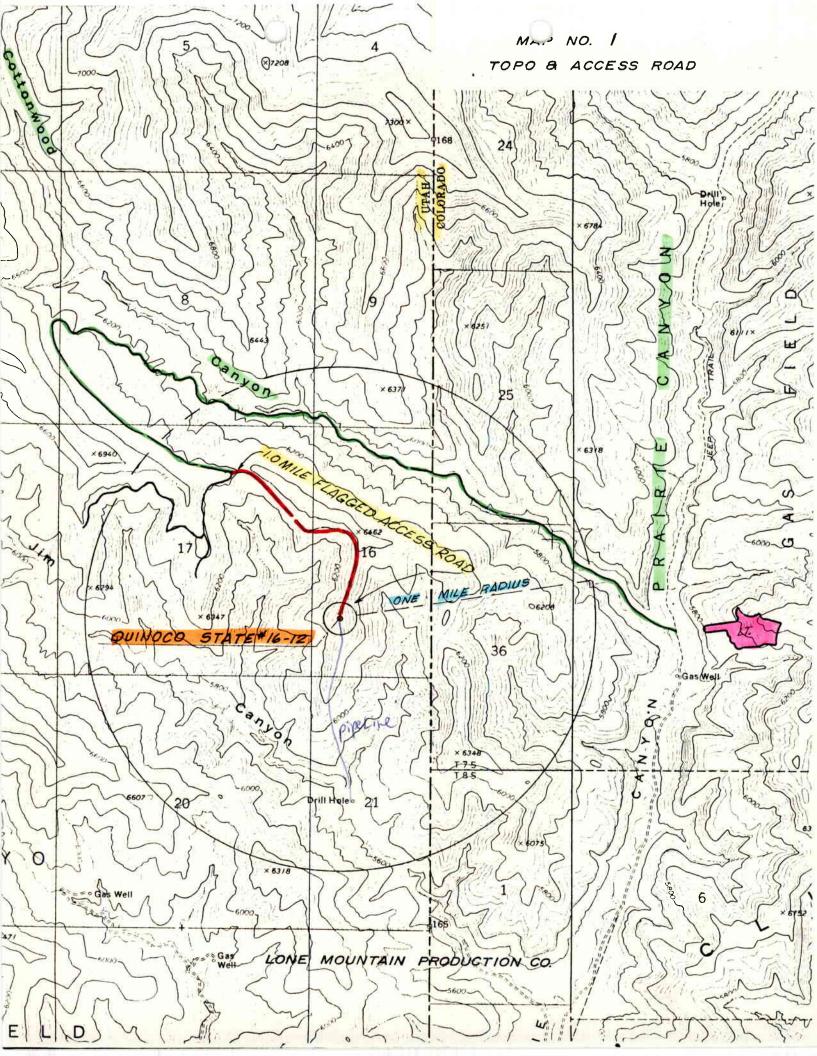


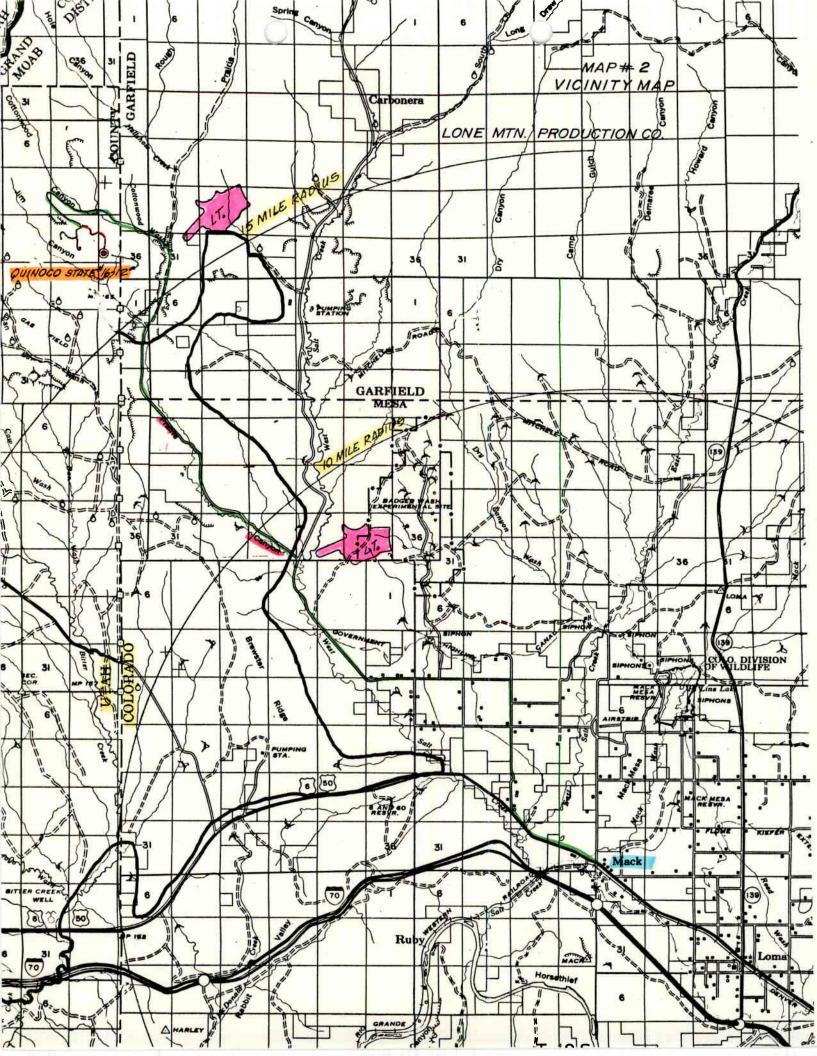
PREPARED BY ENERGY SURVEYS & ENGINEERING GRAND JUNCTION, COLORADO

STATE # 16 - 12 QUINOCO









OPERATOR Kone M	ountain from	C. 60 DAT	E 4-1-87
WELL NAME Quinoro	State 16-12		
SEÇ SWSW 16 T	165 R 26	E COUNTY	Grand
43-019-3 API NUMBER		State TYPE OF	LEASE
CHECK OFF:	LAR	C. 487-0083 C.L. Bonser BOND	
PLAT		BOND	NEAREST WELL
LEASE	V	FIELD	POTASH OR OIL SHALE
PROCESSING COMMENTS:	$s\omega/\psi$ -	Cause 1	3-6
Water healed f			
APPROVAL LETTER:			
SPACING: 203	UNIT		302
CA CA	3-4 3/26/81, USE NO. & DATE	2	302.1
STIPULATIONS: 1- State History	_		
2- The operator	shall notify	DOGM at	least 18 hours
Prior to placing	g fluids in	reserve pit	to allow
2- The aperator Prior to placing inspection of	pit & site	e Constructi	on,
			1



355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

April 21, 1987

Lone Mountain Production Company 408 Petroleum Building P. O. Box 3394 Billings, Montana 59103

Gentlemen:

Re: Quinoco State 16-12 - SW SW Sec. 16, T. 16S, R. 26E 1215' FSL, 596' FWL - Grand County, Utah

Approval to drill the referenced well is hereby granted in accordance with the Order of Cause No. 13-6 dated March 26, 1987, subject to the following stipulations:

- 1. Prior to any ground-disturbing activity on state lands or lands owned or controlled by the state or its subdivisions, a cultural resource clearance report must be filed with and approved by the Division of State History, phone (801) 533-4563. A list of acceptable archaeological contractors is available from the Division of State History.
- The operator shall notify the Division of Oil, Gas and Mining at least 48 hours prior to placing fluids in the reserve pit to allow inspection of pit and site construction.

In addition, the following actions are necessary to fully comply with this approval:

- Spudding notification to the Division within 24 hours after drilling operations commence.
- 2. All well operators are responsible for sending an Entity Action Form to the Division of Oil, Gas and Mining within five working days of the time that a new well is spudded or a change in operations or interests necessitates a change in Entity status.
- Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

Page 2 Lone Mountain Production Company Quinoco State 16-12 April 21, 1987

- 4. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
- Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 533-6163.
- 6. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-019-31243.

Sincerely,

R. J. Firth

Associate Director, Oil & Gas

as Enclosures

cc: State Lands and Forestry Branch of Fluid Minerals

D. R. Nielson

3159T

062902

DIVISION OF OIL, GAS AND MINING

	SPUDDING INFORM	ATION AP	I #43-019-31243
NAME OF COMPANY:	LONE MOUNTAIN F	PRODUCTION	
WELL NAME:	Quinoco State 1	16-12	
SECTION SW SW 16 TOWNSHIP	16S RANGE	26E Cou	NTY Grand
DRILLING CONTRACTOR Ve	co		·
RIG #2			
SPUDDED: DATE 6-19-87		•	
TIME 6:30 PM			
HOWRotary			
DRILLING WILL COMMENCE			
REPORTED BYJim Routson			
TELEPHONE # 416-245-507			
DATE 6-22-87		SIGNED	AS

SINCE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL GAS AND MINING

SUBMIT TRIPLICATE: (Othe tructions on reverse side)

	DIVISIO	N OF OIL, GA	S, AND MI	ling	5. LEASE DESIGNATI	ION AND BERIAL NO.
CUNDO	ML-29608 6. IF INDIAN, ALLOT	TER OR TRIBE NAME				
SUNDR Do not use this form U	06	2931				
OIL UAR V					7. UNIT AGREMBNT	HAMB
WELL WELL X	OTRES				S. FARM OR LBASE	HAMB
Lone Mountain P	roductio	n Company		•	State	
3. ADDRESS OF OPERATOR		5 6 5	2204 041	lines Montons E0102	9. WELL NO.	, 1 A
408 Petroleum B				lings, Montana 59103	16-12	. OR WILDCAT
See also space 17 below.) At surface	LE TOCKTION CIE	sily and in second	ance with any	aeres tadititamaner.	San Arroyo	
	FSL, 596	' FWL Secti	on 16		11. asc., T., B., M., G agayat on A	DE BLE. AKB
					SW1SW1 Sec.	16-T16S-R26E
14. PERMIT NO.		18. BLEVATIONS (S	bow whether DF	AT, GR. etc.)	12. COUNTY OR PAR	
43-019-31243		6379' GL,	6390' KB		Grand	<u>Utah</u>
16.	Check Apr	propriate Box T	o Indicate N	ature of Notice, Report, or	Other Data	•
XO2:	 ICB OF INTENT				equant ampost of:	
TEST WATER SHUT-OFF		ILL OR ALTER CASI	NG O	WATER SHUT-OFF	REPAIRIN	O WELL
PRACTURE TREAT	M	ULTIPLE COMPLETE		PRACTURE TREATMENT		CARING
SHOOT OR ACIDISE	^	ANDON®		SECUTING OR ACIDIZING	ABANDON	MENT*
REPAIR WELL	c	IANGE PLANS	 	(Other) Beans seen	lts of multiple completion pletion Report and Log	on on Well
17. DESCRIBE PROPOSED OR CU proposed work. If we nent to this work.)	MPLETED OPER	ATIONS (Clearly strally drilled, give	ute all pertinen subsurface locat	t details, and give pertinent date ions and measured and true vert	on Including estimated	date of starting any
Spudded 12½" hole	e at 6:30	P. M., 6-1	9-87. V e	co Drilling Co. Rig	No. 2.	
Drilled 12½" hold 150 sacks Class	e to 192' "G", 3%	. Set 9 5/ CaCl ₂ , 1/4#	8" casing //sack_cel	at 188'. Cemented loflake.	to surface wit	th ·
Drilled 8 3/4" he 50-50 pozmix, 3		00'. Set 7	" casing	at 1699'. Cemented	with 150 sacks	5
Notified Arlene	Sollis, l	tah Divisio	on of Oil,	Gas, & Mining at 8	:15 A. M., 6-22	2-87.
				REC	N 2 4 1987	
					IVISION OF GAS & MINING	
18. I hereby certify that the	e foregoing is	true and correct		Petroleum Engineer	nam .liif	ne 22, 1987
SIGNED	219-16	TANA PARTY	TITLE	CHAICINE THÂINCH		
(This space for Federa	or State off	e use)				
APPROVED BY	ROVAL, IF A	NY:	TITLE		DATE	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL GAS, AND MINING

SUBM_N TRIPLICATE: (Other instructions on reverse side)

	DIVISION OF OIL, GAS, AND MINING					
	ML-29608					
SUNDRY NOTION OF THE PROPERTY	6. IF INDIAN, ALLOTTES OR TRUE NAME 070722					
I. OIL UAS X OTHER			7. UNIT AGREEMENT NAME			
WELL WELL A OTHER			S. FARM OR LEASE NAME			
Lone Mountain Productio	on Company		State			
3. ADDRESS OF OPERATOR	D 0 Day 2204 Di	llings Montana 50103	9. WELL NO.			
408 Petroleum Building,			16-12 10. PIBLD AND POOL, OR WILDCAT			
See also space 17 below.) At surface		,	San Arroyo			
1215' FSL, 596	5' FWL Section 16		11. SEC., T., R., M., OS BLE. AND SURVEY OR AREA			
			SW\(\frac{1}{4}\)SW\(\frac{1}{4}\) Sec. 16-T16S-R26E			
14. PERMIT NO.	15. SLEVATIONS (Show whether s	DF, RT, GR. etc.)	12. COUNTY OR PARISH 18. STATE			
43-019-31243	6379' GL, 6390' K	В	Grand Utah			
16. Check Ap	propriate Box To Indicate	Nature of Notice, Report, or	Other Data			
NOTICE OF INTENT			QUENT REPORT OF:			
TEST WATER SEUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL			
FRACTURE TREAT	CULTIPLE COMPLETE	PRACTURE TREATMENT	ALTERING CASING			
<u> </u>	ABANDON*	Shouting or acidizing	XX			
REPAIR WELL (Other)	HANGE PLANS	(Other) Recent result	s of multiple completion on Well pletion Report and Log form.)			
	RATIONS (Clearly state all perting		s, including estimated date of starting any cal depths for all markers and zones perti-			
nent to this work.)						
Spudded $12\frac{1}{4}$ " hole at 6:30						
Drilled 12¼" hole to 192 150 sacks Class "G", 3%	'. Set 9 5/8" casir CaCl2, 1/4#/sack ce	ng at 188'. Cemented elloflake.	to surface with			
Drilled 8 3/4" hole to 1. 50-50 pozmix, 3% CaCl ₂ .	700'. Set 7" casing	g at 1699'. Cemented	with 150 sacks			
Notified Arlene Sollis,	Utah Division of Oil	l, Gas, & Mining at 8:	15 A. M., 6-22-87.			
		RE	CERVED IN 24 1987			
		1	DIVISION OF			
	GAS & MINING					
18. I hereby certify that the foregoing i	s true and correct					
O may be a	ZINATAR TITLE	Petroleum Engineer	DATEJune_22, 1987			
SIGNED STATE OF						
(This space for Federal or State off			DATE			
CUMULL. 'S OF APPROVAL, IF	ANY:					



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL SITE GEOLOGY - MUD LOGGING-

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

June 26, 1987

Lone Mountain Production Co. P.O. Box 3394 Billings, Montana 59103



DIVISION OF OIL, GAS & MINING

Gentlemen:

Enclosed is the final log on your Quinoco State #16-12 well, located in Section 16, T16S, R26E of Grand County, Utah.

We appreciated the opportunity to serve you. If we can be of any further assistance in the final evaluation of zones encountered, please feel free to call on us.

We are looking forward to working with you again in the near future.

Sincerely.

Andy Kelley President

AWK/11f

ENC: 2 FINAL LOGS

XXC: 2-QUINOCO, DENVER

2-SONAT EXP., DENVER 2-DIV. OIL & GAS, SLC

1-SUEK OIL, NORTHGLENN

1-B&H RESOURCES, BILLINGS

1-ROBERT BALSAM, BILLINGS 1-JOHN & MARY BAROVICH, BILLINGS

1-WILLIAM BUNIGER, LOMA

1-S.A CHORNEY, DENVER

1-NEIL FEHRINGER, BILLINGS

3-J & L OIL & GAS, BILLINGS

3-T.H. MC ELVAIN, SANTA FE

1-MONTANA & WYOMING OIL, BILLINGS

1-JACK C. ROUTSON, LARAMIE

1-DR. BRIAN GAMBLE, CANADA

1-D & G ROUSTABOUT SERVICE 1-HAROLD HOLDEN, BILLINGS

3-SONAT EXP., HOUSTON + 1 SEPIA

- 3

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

SUBMI TRIPLICATE: (Other instructions on reverse side)

_	DIVISION OF OIL, GAS, AND MINING						ML-29608 6. IF INDIAN, ALGERIA OF THE CAME		
-	Us	e "APPLICATION FOR	PERMIT—" for	such propossis.)	int reservoir.				
1.	OIL GAS X					7. UNIT AGREEMENT NA	MB		
2.	NAME OF OPERATOR	OTHES				8. FARM OR LBASE HAM	3		
	Lone Mountain P	roduction Compa	iny		·	State			
3.	ADDRESS OF OPERATOR		D 0004	D:33: M-	F0102	9. WELL NO.			
<u>_</u>	408 Petroleum B					10-12	WILDCAT		
٦.	See also space 17 below.) At surface	re tocation clearly and it	7 Secolarnes At	th and acres tedifican	88 ts	San Arroyo			
	1215'	FSL, 596' FWL S	Section 16	;		11. SSC., T., B., M., OR B SURVEY OR ARBA	LE. AND		
						SW1SW1 Sec. 16	-T16S-R26F		
17	. PERMIT NO.	I E Bi ma	wave /Shaw wh	ther of, ST, GR, etc.)		12. COUNTY OR PARISM			
14	43-019-31243		9' GL, 639			Grand	Utah		
_				· · · · · · · · · · · · · · · · · · ·		Other Deta			
16.		Check Appropriate	Box to indic	are Nature of No		JINET DOIG			
	X021	CE OF INTENTION TO:		,	202230	-			
	TEST WATER SEUT-OFF	PULL OR ALT		-1	SHUT-OFF	REPAIRING W			
	FRACTURE TREAT	MULTIPLE CO	MPLKTE	 }	NG OR ACIDIZING	ABANUONMEN	· —		
	SHOOT OR ACIDIZE REPAIR WELL	ABANDON*	×a	(0)	Status Re		X		
	(Other)			_1 1 C	annietion or Krcompi	of multiple completion (letion Report and Log for	41. /		
17	DESCRIBE PROPOSED OR CO proposed work. If we nest to this work.) *	MPLETED OPERATIONS (Claim is directionally drilled	early state all p , give subsurfa	ertinent details, and ce locations and meas	give pertinent dates. Fred and true vertical	including estimated date al depths for all markers	of starting any and zones perti-		
	Drilled 6¼" hol 175 sacks 10-0		an 4½", 11	.6#, J-55 cas	ing to 5210'	. Cemented wit	h		
	Rig released at	2:00 A. M., J	ıne 25, 19	187.					
	Log Tops:	Castlegate	1273'	(+5117')					
		Mancos	1472'	(+4918')					
		Dakota Silt	4767'	(+1623')					
		Dakota Sand Morrison	4832 ' 5009 '	(+1558') (+1381')					
Plan t	o start completi		6 . 1987.	·					
	•	•			D)2(C)	EI(M)EIII			
					With , a	9			
					NUL UU	29 1987			
			•		DIV	ISION OF			
						S & MINING			
					0, 				
7	8. I hereby certify that th	e foregoing is true and	correct						
1	SIGNED James	D. Route	TITL	<u>Petroleum</u>	Engineer	DATE June	25, 1987		
1	(This space for Federal	or State office use)							
	APPROVED BY		TITL	E		DATE			
	Cumula S OF APP	ROYAL, IF ANY:							

LONE MOUNTAIN PRODUCTION COMPA

P.O. BOX 3394 408 PETROLEUM BUILDING BILLINGS, MONTANA 59103-3394 (406) 245-5077



DIVISION OF OIL, GAS & MINING

June 30, 1987

John Baza, Petroleum Engineer Division of Oil, Gas & Mining 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203

Re: State No. 16-12

SW SW Section 16: T16S-R26E

Grand County, Utah LEASE ML-29608

Dear John:

Enclosed in triplicate please find a Sundry Notice to lay pipeline on lease for the subject well. Maps are attached showing the line route.

Should you have any questions, please don't hesitate to give me a call.

Very truly yours,

LONE MOUNTAIN PRODUCTION COMPANY

James 6. Routson

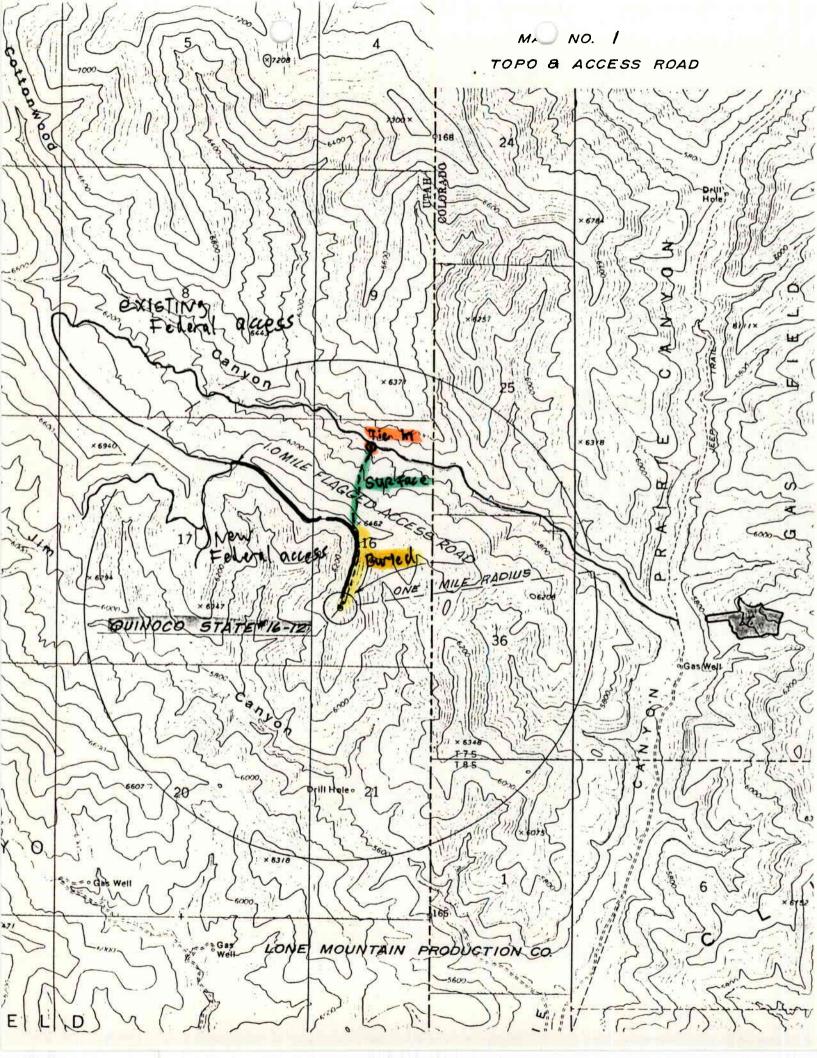
JGR/1w

Enclosures

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING

SUBMI TRIPLICATE: (Other instructions on reverse side)

	MENT OF NATURAL RES On of Oil, Gas, and M		5. LEASE DESIGNATION AND SERIAL NO.			
)		ML-29608 Dulg.			
SUNDRY NOT	ICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTER OR TRIBE NAME			
(Do not use this form for propos Use "APPLICA	$oxed{070730}$					
.		7	T. UNIT AGREEMENT NAME			
WELL WELL A OTHER						
1. NAME OF OFERATOR	Company		8. FARM OR LEASE NAME State			
Lone Mountain Production 3. ADDRESS OF OPERATOR	Company		9. WELL NO.			
408 Petroleum Bldg., P.O	. Box 3394, Billings	, MT 59103	16-12			
4. LOCATION OF WELL (Report location of See also space 17 below.)	early and in accordance with as	ly State requirements.	10. FIELD AND POOL, OR WILDCAT			
At surface			San Arroyo			
1215' FSL,	596' FWL; Section 1	6	SUBABL OF THEY			
			SWASWA Sec. 16: T16S-R26E			
14. PERMIT NO.	18. BLEVATIONS (Show whether		12. COUNTY OR PARISH 18. STATE			
43-019-31243	6379' GL, 6390'		Grand Utah			
16. Check As	propriate Box To Indicate	Nature of Notice, Report, or C	Other Data			
Notice of Inter	TION TO:	DOBARUA	BHE ABPORT OF:			
TEST WATER SEUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL			
FRACTURE TREAT	MULTIPLE COMPLETE	PRACTURE TREATMENT	ALTERING CABING			
	ABANDON*	SHOUTING OR ACIDISING	ABARDONASAT			
(Other) Lay Pipeline of	CHANGE PLANS	(Other) (Nors: Report results	of multiple completion on Well etion Report and Log form.)			
		the second secon	including estimated date of starting any idepths for all markers and zones perti-			
Lone Mountain Production Company proposes to lay a 3-1/2" O.D., .254 wall, Grade J-55 welded steel line to connect the State No. 16-12 into a Northwest Pipeline Lateral. All construction will be on Lease ML-29608, which consists of all of Section 16. The line will be coated, wrapped and buried in the existing access road for approximately 1700 feet, and will be a surface leg off for approximately 1800 feet. The attached maps show						
the line route. Archaeologicalclearance i portion of the line has a						
		RECEI JUL 02	1987 1987			
		DIVISION OIL, GAS & I	* ** -			
18. I hereby certify that the foregoing	// ^	James G. Routson, Petroleum Engineer	DATE 6/30/87			
SIGNED	(9th MATA TITLE _					
(This space for Federal or State of	Ace use)	APPRO	TED BY THE STATE TAH DIVISION OF			
APPROVED BY	TITLE		AS. AND MINING			
CUMPILL IS OF APPROVAL, IF	ANT:	DATE 7-	6-87			
		RY John				
	*See Instructi	ons on Reverse Side	A STATE OF THE PARTY OF THE PAR			







Consulting Engineers and Chemists 526 20% Road, Grand Junction, Colorado 81503 (303) 242-6154

To: LONE MOUNTAIN PRODUCTION P.O. BOX 3394 BILLINGS, MONTANA 59103 Date: JUL. 14, 1987 Number: TMI/LMP 87-11

GAS ANALYSIS

COMPANY: LONE MIN. PROD.

SUBMITTED BY: RALPH SNOW

SAMPLE IDENTIFICATION: QUINOCO STATE 16-12

DATE SAMPLED: JUL. 6, 1987

DATE RECEIVED: JUL. 13, 1987

DATE TESTED: JUL. 13, 1987

HEATING GAL. IDEAL GROSS HEATING SUMMA- COMPR- SP.GR. VALUE LIQ./ IDEAL GAS VALUE, DRY, BTU/SCF COMPRESSIBIL- TION ESS. F FRACT- FRACT- 1000 (60F and 760 mm Hg) ITY FACTOR FACTOR RACTION ION. CAL. MOLE %. SPECIFIC /100=X NUMBER NAME GRAVITY.G ,Н e STP. Z ,SQR b XSQR b X G 1 HYDROGEN 0 .0696 325.02 1.0006 0 0 .1342 .00189 .02141 35.396 .38595 2 .982 PROPANE 1.406 1.5225 2517.5 .264 2.0068 .9696 .1744 4.6E-4 .00530 8.5871 .08609 4 ISO-BUTANE 3252.7 5 HYDROGEN SULFIDE 0 1.1765 637 .9903 .0985 0 0 6 N-BUTANE: .318 2.0068 3262.1 .9667 .1825 5.8E-4 .00638 10.373 .09995 4000.3 .9482 .2276 3.3E-4 .00356 5.7204 .05220 10 ISO-PENTANE .143 2.4911 .9435 .2377 2.5E-4 .00262 4.2101 .03792 11 N-PENTANE .105 2.4911 4009.6 CARBON DIOXIDE .99432 .064 4.7E-4 .01112 12 .732 1.5195 14 ETHANE 4.83 1.0382 1768.B .9916 .0917 .00443 .05015 85.433 15 OXYGEN 0 1.1048 .99927 .027 0 0 16 NITROGEN 1.264 .9672 .99973 .0164 2.1E-4 .01223 90.701 .5539 .9981 .0436 .03955 .50239 915.81 17 METHANE 1009.7 .92 0 19 0 3.4596 5502.8 .283 0 .283 6.7E-4 .00708 11.320 .09760 20 4756.2 .92 £6 + .238 2.9753 0 21 0 2.9753 4746 .92 0 0 TOTALS 100.00 .04883 .62223 1076.8 .75970

NOTES: Z=

.99762. IDEAL SPECIFIC GRAVITY OF MIXTURE =

.62223. REAL SPECIFIC GRAVITY OF MIXTURE =

.62346

IDEAL GROSS HEATING VALUE, DRY BASIS, PER SCF (60F & 760 mm Hg) =

1076.8. REAL GROSS, DRY HEATING VALUE = 1079.4

TO CONVERT EITHER THE IDEAL OR REAL DRY, GROSS HEATING VALUE TO SATURATED BASIS @ STP, MULTIPLY EITHER BY 0.9826. THE VALUES AND CALCULATION METHODS USED IN THIS REPORT ARE THOSE GIVEN IN GPA PUBLICATIONS 2145-82 AND 2172-76.

RESPECTFULLY SUBMITTED,

CARLON C. CHAMBERS, P.E.

PRESIDENT

BIT RECORD

WELL NAME: QUINOCO STATE #16-12	ELEVATION: 6390 KB 6379 GL		
CO. NAME: LONE MOUNTAIN PRODUCTION CO.	SECTION: 16, T16S, R26E		
CONTRACTOR: VECO RIG#2_	CO. & STATE: GRAND CO., UTAH		
SPUD DATE: 6-19-87	T.D. DATE:6_24_87		

SPUD (DATE: _	6-1	9-87			_ T.D.	DATE:	6-24	-87	·		
			BIT REC	ORD				F	T PER/DA	Y	DEVIA SURV	ATION VEYS
RUN	SIZE	MAKE	TYPE	XXX IN	FTG	HOURS	FT/HR	DATE	DEPTH	FT	DEPTH	DEV.
1			M44NG	α	191			6-22	on locatio	n		
2		STC	F-3	191	1509			6-23	3478	1574		
3		STC	A-3	1700	1309	16.5	79.3	6-24	5052			
4	-	нтс	J-33	3009	2301	31.25	_	T.D.	5310			
······												
	<u> </u>	·										
												·
·												
											,	
				-								
												1

DEVIATION SURVEY

COMPANY NAME:	LONE MOUNTAIN PRODUCTION	COUNTY:	
	· · · · · · · · · · · · · · · · · · ·		
WELL NAME:		STATE: .	

DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.
192	1/2		•					
717	2							
1206	2							
1700	1							
2210	1	·						•
2711	1							
3207	3/4							
3707	1 1/2							
4269	2 1/4							
4720	3 1/2							
5310	4							
				İ				

SUBMIT IN DUPLICATE*
(See other instructic
on reverse side)

STATE OF U DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING

WELL CO	MPLETION	OR RECON	MPLETION	REPOR	TOCA	BROOM	PROINT INDIAN	ALLOTTER OR TRISE NA	ME
In. TYPE OF WEL		CT GAS C		1		3 E 16 74	UNIT AOR	EENANT NAME	<u></u>
L TYPE OF COM	_ 	C WELL A	A DRT C	Other	<u> </u>	0 400	עטניי		
NEW KX	WORK DEED	P. DACK	DIFF.	Other	JUL	23 198	S. FARM OR	LEASE NAME	
2. NAME OF OPERA	ron						State		
Lone Mour	ntain Produc	ction Compa	ny			VISION OF	9. WELL NO.		
3. ADDRESS OF OPE						AS & MINI	1 110. 10		
	eum Building							ND POOL, OR WILDCAT	
4. LOCATION OF WE				any State re	quiremen	(e) *	San Ar	POYO BLOCK AND SUBS	
	1215' FSL,		ection to	1	. :		OR AREA	a, a, ve spock and out	
At top prod. In	terval reported bel	Same					SW1SW1 S	ec. 16-T16S-R26	iΕ
At total depth	C								
	Same		14. PERMIT			ISSUED	12. COUNTY PARISH		
			43-019			-21-87	Grand	Utah	
15, DATE SPUDDED	1	FACHED 17. DAT		y to proa.;			NA VD	6380'	
6-19-87	6-24-87	0. BACK T.D., MD A	-87	ITLTIFLE CON	6379	GL, 639			
5310'	i i	172'	ном	MANT.		DRILLE	. 1 0-TD	.	
24. PRODUCING INTE			, BOTTOM, NAME	(MD AND TI	7D) *			25. WAR DIRECTIONA	it
Dakata 404	CC 4002 401	26 4062 40	00_5000					No	
Dakota 480	66-4902, 493	30-4902, 49	90-0000					1	
26. TIPE ELECTRIC						,		27. WAS WELL CORED	
GR-FDC-CNI	L, DIL, GR-		ud 206			· · · · · · · · · · · · · · · · · · ·		No	
28.			ING RECORD (Report all etr	ingo set		TING RECORD	AMOUNT PULLED	
CASING SIZE	WEIGHT, LB./							· · · · · · · · · · · · · · · · · · ·	<u></u>
9 5/8" 7"	32.30# J			121"			to surface)	None None	
4 1/2"	23# J-55 11.6# J-9			<u>8 3/4" </u>		50 sx. 75 sx. (1	to 2250)	None None	
	11.0# U-S	22 221	<u> </u>	017.4	- -	(3 2X - L	.0.32307		_ ,
29.		LINER RECORD				30.	TUBING REC	ORD	_
SIZE	TOP (MD)	BOTTOM (MD)	SACRE CEMENT	* SCREEN	(MD)	SIZE	DEPTH SET (M	(D) PACEER SET (MC	D)
None						2 3/8"	5041	None	
			<u> </u>			<u> </u>			
31. FRAFORATION AR				82.			RACTURE, CEMEN		 .
	diameter hol				INTERVA			TO MCD /UCL	
	depths: 48				-5004 -5004			5% MSR (HC])	— moch
4950, 4958	5, 5004. /	total hole	· 5 •	-40/0	-5004			<u>th 20,000# 100</u> _20-40 sand; 48	
								mmscf nitrogen	
33.*				RODUCTION					
DATE PIRET PRODUCT	TION PRODU	CTION METHOD (Flowing, gas lift	, pumping—	eise and i	ype of pump)		STATUS (Producing or it-in)	
7-7-87		lowing						Shut in	
DATE OF TEST	HOUAS TESTED	CHORE SIZE	FROD'N. FOR		åL.	GAS-NCF.	WATER-BBI	L. GAR-OIL BATIO	
*7-16-87	24	.375"		0		*1623	0		
PLOW, TUBING PRESS.	CASING PRESSU	24-HOUR RAT	OIL-BAL.	ري . ا	- HCP.		TUR-OBL.	OIL GRAVITY-API (CORR.)	,
*505 psig	*585 psic				*162	5	TEST WITHE	SARD AT	
	~~~ (., v.u, ==tu /0/	,, ·, etc.,	,				ł		
Vented 35. LIPT OF ATTACE	IMENTA		······································				ı pave	Terrell	
	analysis								
36. I berehy certify	that the foregoing	g and attached to	nformation is co	omplete and	correct A	e determined	from all available	records	
	amen &	1-1121 A	_	Datu-	.lo '			411. 00 30	10.7
Jai	ies G. Routs	son VYWV	TITLE	retro	TENII I	Engineer	DAT	<u>*July 20, 19</u>	1971
						***********	<del></del>		_

# INSTRUCTIONS

Any sevessary appeals instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practities are abown below or will be issued by, or may be obtained from, the local Federal and/or State other. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. General: This form is designed for submitting a complete and correct well certrification versors and larges of lands and leases to either a Federal agency or a State agency or both, pursuant to siplicable Federal and/or State laws and regulations.

If not filed prior to the time this summary record is submitted, copies of all currently scullable logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and the curreys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments Hem 4: If there are no applicable State requirements, locations on Federal or Indian and should be described in accordance with Federal requirements. Consult local State should be listed on this form, see Item 35.

or Federal office for specific instructions.

leas 22 and 24: If this well is completed for separate production from more than we interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

When 29: "Sacks Cement". Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

When 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.) then 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

27. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT EDIES O DEPTH INTERVAL TESTED, CUSS	MART OF POROUS ZONES: SHOW ALL IMPORTANT SOMES OF POROSITY AND CONTENTS THERBOF; DEFTH INTERVAL TESTED, CUSHION USED, TIMS TOOL OPEN, PLOWING	ROBITY AND CONTENT URED, TIME TOOL OF	TE THERBOF; CORED INTRRVALE; AND ALL DRILL-STRM THETE, INCLUDING FEW, PLOWING AND SHUT-IN PRESSURES, AND RECOVERING	38.	GBOLOGIC MARKERS	
FORMATION	TOF	BOTTOM	DESCRIPTION, CONTENTS, Brc.		10t	
					MBAB. DEPTE	TRUS VALT. PAPTE
Castlegate	1273	1308	Tight, damp w/water	<i>1 .</i>		
Dakota	4866	4902	Tight gas	Castlegate	1273	(+5117')
Dakota	4936	4962	Gas	Mancos	1472	(+4918')
Dakota	4998	2008	Tight gas	Dakota Sand	4/6/	(+1623 )
	•			Morrison	2009	(+1381+)
ين ينچر	<del></del>					
-						
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			•			
				<del></del>		

(b)

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING 3 TRIAD CENTER, SUITE 350 SALT LAKE CITY, UT 84180-1203

### REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & No	umber <u>State No</u> .	16-12						_
Operator Lone	Mountain Producti	on Company	Address	P.O.Box	3394,	Billing	gs, MT 59	<u>1</u> 03
Contractor Ve	co Drilling Compa	iny	Address	P.O.Box	1705,	Grand	Junction,	_CO 81502
Location SW	_1/4 <u>SW</u> 1/4	Sec. 16	T. 16S	R	26E	County_	Grand	-
Water Sands					·			
De	oth_	Volume			Qua	ality		
From	To	Flow Rate of	r Head		Fresh	or Sal	Lty	
1. No measura	ble water encount	ered.						-
2. Several da	unp sands in Mesav	erde and Ca	stlegate.			·-···		-
3								-
4								-
5	. (Continue o	n reverse s	ide if ne	ecessary	)	<del></del>		•
Formation Tops	Castlegate Mancos Dakota Silt Dakota Sand Morrison	1273 1472 4767 4832 5009				·		
	Report on this fo Conservation Gene		ded for i	in Rule	<b>806,</b> 0:	il and	Gas	

If a water analysis has been made of the above reported zone, please forward a copy along with this form.

Form 31605 (November 1983)	UN'TED STATES ARTME OF THE IN	(Other Instruction n	Budget Bureau No. 1004-0135 Expires August 31, 1985 5. LEASE DESIGNATION AND SERIAL NO.
•	JREAU OF LAND MANAGE		ML-29608 5G
SUNDRY I	NOTICES AND REPOR	RTS ON WELLS r plug back to a different reservoir.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME  080413
Use "Al	PPLICATION FOR PERMIT—" for	r plug back to a different reservoir. r such proposals.)	7. UNIT AGREEMENT NAME
OIL GAS TV	H & R		
2. NAME OF OPERATOR  LONE MOUNTAIN PRODUC	TION COMPANY		8. FARM OR LEASE NAME State
3. ADDRESS OF OPERATOR	TION COM ANT		9. WBLL NO.
408 Petroleum Bldg.,	P.O. Box 3394, Bill ation clearly and in accordance w	ings, MT 59103	16-12 10. FIELD AND POOL, OR WILDCAT
See also space 17 below.) At surface	action citating and the decoration in	,	San Arroyo
1215' FS	L, 596' FWL, Section	n 16	11. SEC., T., B., M., OR BLE. AND SURVEY OR ARMA
			SW1 SW1 Sec. 16: T16S-R26
14. PERMIT NO.	15. ELEVATIONS (Show wh		12. COUNTY OR PARISH 13. STATE
43-019-31243	6379' GL, 6390		GRAND UTAH
	• •	cale Nature of Notice, Report, o	
r1	INTENTION TO:	¬	SEQUENT REPORT OF:
FRACTURE TREAT	PULL OR ALTER CASING MULTIPLE COMPLETE	WATER SHUT-OFF FRACTURE TREATMENT	ALTERING CASING
SHOOT OR ACIDIZE	ABANDON®	SHOOTING OR ACIDIZING	ABANDONMENT [®]
REPAIR WELL	CHANGE PLANS	(Other) (NOTE: Report res	STATUS REPORT X  units of multiple completion on Well  completion Report and Log form.)
Shut in; waiting on	pipeline.		
18. I hereby certify that the fore	going is true and correct  Other TITL	James G. Routson Petroleum Engineer	DATE August 1, 1987
(This space for Federal or St	ate office use)		
APPROVED BYCONDITIONS OF APPROVAL	TITL	.JC	RECEIVED
	*See Insti	ructions on Reverse Side	AUG 3 1987

DIVISION OF OIL

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any depace. MININGLY of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5 (November 1983) (Formerly 9-331)  UNITED STATES SUBMIT IN TRIPLICATE* (Other Instructions re- verse side)  BUREAU OF LAND MANAGEMENT	Budget Bureau N Expires August 3 5. LEASE DESIGNATION A ML - 29608	ND BERIAL NO
SUNDRY NOTICES AND REPORTS ON WELLS  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  Use "APPLICATION FOR PERMIT—" for such proposals.)	6. IF INDIAN, ALLOTTER 0908	3 g
OIL GAS WELL X OTHER	7. UNIT AGREEMENT NAM None	
LONE MOUNTAIN PRODUCTION COMPANY  3. ADDRESS OF OPERATOR	State  9. WELL NO.	······································
P.O. Box 3394, 408 Petroleum Bldg., Billings, MT 59103  4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*  See also space 17 below.)	16-12 10. FIELD AND POOL, OR	WILDCAT
1215' FSL, 596' FWL, Section 16	San Arroyo  11. BBC, T, E, M., OR BL SURVEY OR ARMA  SW4SW4 Sec. 16:	
14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, OR, etc.) 43-019-31243 6379' GL, 6390' KB	12. COUNTY OR PARISH	Utah
TEST WATER SHUT-OFF  PULL OR ALTER CASING  PRACTURE TREAT  MULTIPLE COMPLETE  SHOOT OR ACIDIZE  REPAIR WELL  CHANGE PLANS  WATER SHUT-OFF  FRACTURE TREATMENT  SHOOTING OR ACIDIZING  (Other)  (NOTE: Report results or	REPAIRING WE ALTERING CAS ABANDONMENT Status Report of multiple completion or thou Report and Log form including setting date.	well
	GAS & MORING	
18. I hereby certify that the foregoing in true and correct  SIGNED James G. Routson  (This space for Federal or State office use)	DATE August	31, 1987

TITLE ...

DATE _

APPROVED BY _______ CONDITIONS OF APPROVAL, IF ANY:

(No	united states  vember 1983) rmerly 9-331)  UNITED STATES  UNITED STATES  Other Instructions re- re- re- BUREAU OF TAND MANAGEMENT	Expires August 31, 1985  5. LEASE DESIGNATION AND SERIAL NO ML - 29608  SGW
	SUNDRY NOTICES AND REPORTS ON WELLS  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  Use "APPLICATION FOR PERMIT—" for such proposals.)	101394
	OIL GAS WELL OTHER	7. UNIT AGREEMENT NAME  NONE 8. FARM OR LEASE NAME
	LONE MOUNTAIN PRODUCTION COMPANY  ADDRESS OF OPERATOR	State 9. WBLL NO.
4.	P.O. Box 3394, 408 Petroleum Bldg., Billings, MT 59103 LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*  See also space 17 below.) At surface  1215' FSL, 596' FWL, Section 16	16-12 10. FIELD AND POOL, OR WILDCAT  San Arroyo 11. SEC., T., B., M., OR BLK. AND BURYEY OR ARMA  SW4SW4 Sec. 16: T16S-R26E
14.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 43-019-31243 6379' GL, 6390' KB	12. COUNTY OR PARISH 13. STATE  Grand  Utah
16.	Check Appropriate Box To Indicate Nature of Notice, Report, or C	
	NOTICE OF INTENTION TO:	ENT REPORT OF:
	PULL OR ALTER CASING WATER SHUT-OFF  PRACTURE TREAT  SHOOT OR ACIDIZE  REPAIR WELL  (Other)  DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates.	ALTERING WELL ALTERING CASING ABANDONMENT* Status Report  of multiple completion on Well etion Report and Log form.)
	Shut in. Waiting on pipeline.	
		RECEIVED
		OCT) 8 1987
		DIVIDION OF <b>CIL</b> QAS NIC 1140
18.	I hereby certify that the foregoing is true and correct  SIGNED James G. Routson  (This space for Federal or State office use)	October 1, 1987

APPROVED BY _____CONDITIONS OF APPROVAL, IF ANY:

DATE __

Ferm 3160-5 (November 1983) (Fougerly 9-331)	UNITED STATES DEPARTMEN OF THE INTER BUREAU OF LAND MANAGEMEN		Budget Burcau No Expires August 31 5. LEASE DESIGNATION AN ML- 29608	l, 1985
(Do not use this fo	ORY NOTICES AND REPORTS  orm for proposals to drill or to deepen or plug  use "APPLICATION FOR PERMIT—" for such	back to a different reservoir.	6. IF INDIAN, ALLOTTEE OF	
OIL GAS WELL D	OTHER		7. UNIT AGREEMENT NAME None	
	IN PRODUCTION COMPANY		8. FARM OR LEAST NAME State	
4. LOCATION OF WELL (Rep See also space 17 below At surface	94, 408 Petroleum Bldg., Bil port location clearly and in accordance with an 'FSL, 596' FWL, Section 16		16-12 10. FIELD AND POOL, OR W. San Arroyo 11. SEC., T., E., M., OR BLE. SURVEY OR AREA	
			SWłSWł Sec. 16:	T16S-R26E
14. PERMIT NO. 43-019-31243	15. ELEVATIONS (Show whether to 6379' GL, 6390	• •	12. COUNTY OR PARISH 1.	3. STATE Utah
TEST WATER SHUT-OFF FRACTURE TREAT SHOOT OR ACIDIZE REPAIR WELL (Other)  17. DESCRIBE PROPOSED OR Coproposed work. If when to this work.)	Check Appropriate Box To Indicate Interest of Intention to:  PULL OR ALTER CASING MULTIPLE COMPLETE ABANDON* CHANGE PLANS  OMPLETED OPERATIONS (Clearly state all pertine rell is directionally drilled, give subsurface locality of the complete of the compl	WATER SHUT-OFF FRACTURE TREATMENT SHOOTING OR ACIDIZING (Other) (NOTE: Report results Completion or Recomplete	BEPAIRING WEL  ALTERING CASIN ABANDONMENT*  Status Report of multiple completion on multiple completion on the completion of the completio	Well
				y 1.00% (
			NOV 4	1987
			Dryetton <b>Ci</b> myd Aif	F. CIL.
8. I hereby certify that the SIGNED James G. (This space for Federal	<u> Routson                                    </u>	etroleum Engineer	DATE November	1, 1987

DATE __

APPROVED BY _____CONDITIONS OF APPROVAL, IF ANY:

	ovember 1983) ormerly 9-331)  DEPAI		SUBMIT IN TRIPLICATES (Other Instruction on reverse side)	5. LEASE DESIGNATION	AND SERIAL NO
		REAU OF LAND MANAGEMEN		ML - 29608	SGW_DKT
ī.	SUNDRY N (Do not use this form for pour use "APP	OTICES AND REPORTS roposals to drill or to deepen or plus LICATION FOR PERMIT—" for such	osals, DEC 4 1987	12083	35
	OIL GAS X OTHE	3R	DECOME OF	None	A 31 B
2.	LONE MOUNTAIN PRO	DUCTION COMPANY	OIL, GAS & MINING	8. FARM OR LEASE NA	M.E.
3.	ADDRESS OF OPERATOR			State 9. WBLL NO.	
	LOCATION OF WELL (Report location See also space 17 below.)	8 Petroleum Bldg., Billon clearly and in accordance with any	=	16-12 10. FIELD AND POOL, O	R WILDCAT
	At surface	5061 FIR 0 11 16		San Arroyo	BLE. AND
	1215' FSL,	596' FWL, Section 16		SURVEY OR ARMA	l .
		· · · · · · · · · · · · · · · · · · ·		SWASWA Sec. 1	
14.	43-019-31243	15. ELEVATIONS (Show whether D	· · · · · · · · · · · · · · · · · · ·	Grand	Utah
16.	Check	Appropriate Box To Indicate I	Nature of Notice, Report, or C		<u></u>
		NTENTION TO:		UBNT REPORT OF:	
	TEST WATER SHUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING 1	WELL
	FRACTURE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING C	ASING
	SHOOT OR ACIDIZE	ABANDON*	SHOOTING OR ACIDIZING	Status Repor	hT*
	(Other)	CHANGE PLANS	(Other) Report results	of multiple completion letion Report and Log for	on Well
17.	proposed work. If well is dis nent to this work.) •	OPERATIONS (Clearly state all pertiner rectionally drilled, give subsurface locs	it details, and give pertinent dates, tions and measured and true vertice	, including estimated dat al depths for all marker	e of starting any s and zones perti-
	Shut in. Waiting	on pipeline.			
8. 1	I hereby certify that the foregoly	g is true and correct			

DATE _

TITLE _

APPROVED BY _____CONDITIONS OF APPROVAL, IF ANY:

### SUBMI TRIPLICATE (Otherstructions on

	STATE OF UTAH	reverse si	le)	
	ENT OF NATURAL RESOURCES N OF OIL, GAS, AND MINING		IIL LJUVU	3W-DRTA
	ES AND REPORTS ON WEI	LS terent reservoit.	6. IF INDIAN, ALLOTTE	_
OIL UAS TO OTHER	DEC DEC	18 1987	7. UNIT AGESSMENT NA None	
LONE MOUNTAIN PRODUCTION  ADDRESS OF OPERATOR	COMPANY (%), GAS	SA MORIGO	State	43
P.O. Rox 3394, 408 Petro	leum Bldg., Billings, MT 5	9103	16-12 10. FIELD AND POOL, 0	R WILDCAT
See also space 17 below.) At surface 1215' FSL, 596' FWL, Sec			San Arroyo  11. asc., 2., a., M., OR august or Assa SW4SW4 Sec.	
14. PERMIT NO. 43-019-31243	15. BLEVATIONS (Show whether DF, RT, GR, etc.) 6379 GL, 6390 KB		12. COUNTY OF PARISH	Utah
TEST WATER SEUT-OFF FRACTURE TREAT SHOOT OR ACIDIZE REPAIR WELL (Other)	ULTIPLE COMPLETE PRACE BANDON* HANGE PLANS  (Ot)	ER SHUT-OFF TURE TERATMENT OTING OR ACIDISING FIRST P (NOTE: Report results (Completion or Recomple	REPAIRING CASANDONME  roduction  of multiple completion etion Report and Log for	ASING X X on Well rm.)
Nent to this work.)	ATIONS (Clearly state all pertinent details, a sally drilled, give subsurface locations and motions are motions.)	era		s and zones perti-

the state that the descript is true and correct		
8. I hereby certify that the foregoine is true and correct  SIGNED James G. Routson	TITLE Petroleum Engineer	DATE 12/14/87
(This space for Federal or State office use)		
APPROVED BY	TITLE	DATE

DUPLICATE COPIES OF WELL HISTORY INFORMATION

## SUBMIT IN DUPLICATE* (See other instructio on reverse side)

STATE OF U_I

	DIVISION OF						•			5. LEASE DE		ION AND SERIAL NO.
· WELL CO	AADI ETION		DECO	4DL FT			) (C	V-3/2/C	<b>70</b>	1		TTES OR TRIBE NAME
WELL CO		N OK				EP (0) 19	il C	<b>HEIM</b>	//	101		
L TYPE OF COM	"	ELL L	WELL K	م الا	at 🔲 🤇	Othe A	2			URIT AORE	EMENT	NAME .
NEW WELL X	OVER D	ter.	PLEU C	DIF	vr. 🗆 .	other 77	JU	L 231	987	S. FARM OR State	LEAGE	HAME
	ıtain Prod	uctio	n Compa	nv			D	VISION (	0F	9. WELL NO.		
3. ADDRESS OF OPE			п оотра					BAS & M		No. 16	-12	
408 Petrole	eum Buildi	ng, P	. 0. Bo	x 3394	, Bill	ings, Mo	onta	na 591	03	į.		L, OR WILDCAT
4. LOCATION OF WE						State requir	emen	(4)*		San Arı		
	1215' FSL	-	FWL 3	ection	10	1				OR AREA	E., A.,	OR BLOCK AND SURVEY
At total depth	terval reported	below	Same			•				SWESWE S	ec.	16-T16S-R26E
	Same			14. PE	RMIT NO.	<del></del>	DATE	ISSUED		12. COUNTY	DR .	13. STATE
				43-	019-31			21-87		Grand		Utah
15. DATE SPUDDED	16. DATE T.D.	REACHE	1	COMPL.	(Ready to	prod.) 18.	BLE	ATIONS (D		RT, GR, ETC.)*	ł	ELEV. CARINGREAD
6-19-87	6-24-8		7-8			IFLE COMPL.		GL, 6		KB		63801
5310'	Ī	5172'	C T.D., MD A	776   22	AK WOH		` .		LED BY	0-TD	 1	
24. PRODUCING INTE			ETJON-TOP	, BOTTOM,	NAME (M	D AND TVD)*	· · · · ·		->	ט-וט	1 2	S. WAR DIRECTIONAL BURTET MADE
Dakota 486	66-4902, 4	936-4	962, 49	98-500	8		t ;					No.
26. TYPE ELECTRIC	AND OTHER LOG	B RUN				<del></del>	ţ				<del>27. ₩</del>	AS WELL CORD
GR-FDC-CNL	., DIL, GR	-CBL-	VDL								N	0
29.						rt all strings	set f					<del></del>
CASING SIZE	WEIGHT, LI		DEPTH SE		I	01			ENTING			AMOUNT PULLED
9 5/8" 7"	32.30#		18		1	24"			(to	surface)		None None
4 1/2"	23# J-5 11.6# J		169 521			3/4" /4"		5 <u>0 sx.</u> '5 sx.	1+0	22EO)		None None
1/2	11.0# 0		<u>361</u>	<u> </u>		<i></i>		3 SX		123UJ		
29.		LINE	RECORD					30.		TUBING RECO	RD	
8122	TOP (MD)	BOTT	OM (MD)	SACRS CI	EXENT*	SCREEN (MI	))	SIZE	_	DEPTH SET (M	D)	PACKER SET (MD)
None !		_				· <del></del>		2 3/8	<u>"</u>  _	5041		None
31. FEAFORATION RE	coas (Interval.	All and	number)	<u> </u>		82.		ID SHOT	FRACT	URE, CEMENT	SOTT	EEZE ETC.
One .31" d				of the		DEPTH INT				OUNT AND KIN		<del></del> ,
following						4878-50				allons 15		
4950, 4958					,	4878-50						0,000# 100 mesh
			·									40 sand: 480 bb1
	<del></del>			<del>,</del>	5.2.5.	tiomro:			5% HO	1: 1.613	mms	<u>cf nitrogen</u>
33.* Date first peoduct	non I pro	DUCTION	METHOD II	lowing. a		UCTION  mping—size o	and t	ype of pum	(p)	WELL	BTATU	(Producing or
7-7-87		Flowi					•	, ,	•		l-in)	Shut in
DATE OF TEST	HOUAS TESTE		HORE SIZE		Y. FOR	01L-00L.		DK-BAD	₹.	WATER-BOL		GAS-OIL BATIO
<b>*</b> 7-16-87	24		.375"	1887	PERIOD	0		*162	23	0	- 1	
PLOW. TUBING PRIME.	CASING PRESS	2	ALCULATED	OIL	ent	GASI			WATER-	-88L.	OIL O	RAVITT-API (CORR.)
*505 psig	*585 ps	ig				*1	623	<u> </u>				**************************************
34. DISPOSITION OF	DAB (Noid, weed )	or Juel, 1	rented, etc.)							TEST WITHES		
Vented 35. LIST OF ATTACE	MENTS				·			<del></del>		l Dave 1	err	<u> </u>
	analysis											
36. I bereby certify	that the foreg	oing and	attached it	formation	le compl	ete and corre	ct As	determine	d from	all available re	ecords	<del></del>
	James P	7-1	(). A	_	•	Dotas I.e.						1 1 00 1007
SIGNED	et G Rou	tson	- MAN	TI	TLE	<u>Petrole</u> u	四上	nginee	r	DATE		luly 20, 1987

# INSTRUCTIONS

or buth, pursuant to siplicable Federal and/or State laws and regulations. Any accessory special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are abown below or will be issued by, or may be obtained from, the local Federal and/or State unive. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. All attachments tion and pressure tests, and directions surreys, abound be attached brefer, to the extent required by applicable Federal and/or State laws and regulations. All attachments General: This form is designed for submitting a complete and correct well certification verset and hig on all types of lands and leases to either a Federal agency or a State agency

should be listed on this form, see Item 35.

Hem 4: If there are no applicable State requirements, locations on Federal or Indian land abould be described in accordance with Federal requirements. or Federal office for specific instructions.

Consult local State

Hens 22 and 24: If this well is completed for separate production from more than the producing (multiple completion), so state in item 22, and in item 24 abow the producing (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified the 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. interval, or intervals, top(s), bottom(s) and name(s)

for each additional interval to be separately produced, abowing the additional data pertinent to such interval.

Nacks Cement". Attached supplemental records for this well shows the details of any multiple stage cementing and the location of the cementing tool.

New 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

87. SUMMARY OF POROUS ZONES BHOW ALL IMPORTANT ZONES DEFTH INTERVAL TESTED, CUSI	COUS ZONES: RIANT KONES OF POINTERING	ROSITY AND CONTENT USED, TIMB TOOL OI	MARY OF POROUS ZONES: BHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THERBOF; CORED INTERVALS; AND ALL DRILL-STEM TISTE, INCLUDING DEFTH INTERVAL TESTED, CUSSION USED, TIME TOOL OPEN, PLOWING AND SHUT-IN PRESSURES, AND RECOPERING	28	GEOLOGIC MARKERS	
FORKATION	701	HOLLON	DESCRIPTION, CONTENTS, BTC.		Tot	
					MRAS. DEPTE	TRUB VRET. PRETE
Castlegate	1273	1308	Tight, damp w/water	: .		
Dakota	4866	4902	Tight gas	Castlegate	1273	(+5117')
Dakota	4936	4962	Gas	Mancos Dakata Cilt	1472	(+4918¹)
Dakota	4998	2008	Tight gas	Dakota Sand	4832	(+1558')
				Morrison	2009	(+1381+)
				-		
					<del></del>	•
					<del></del>	
						·
					<u></u>	
	· · · · · ·			···.		
				upo a sugar o		





Consulting Engineers and Chemists 526 20% Road, Grand Junction, Colorado 81503 (303) 242-6154

To: LONE MOUNTAIN PRODUCTION P.O. BOX 3394 BILLINGS, MONTANA 59103

Date: JUL. 14, 1987 Number: TMI/LMP 87-11

GAS ANALYSIS

COMPANY: LONE MTN. PROD.

SUBMITTED BY: RALPH SNOW

SAMPLE IDENTIFICATION: QUINOCO STATE 16-12

DATE SAMPLED: JUL. 6, 1987

DATE RECEIVED: JUL. 13, 1987

DATE TESTED: JUL. 13, 1987

HEATING GAL. IDEAL GROSS HEATING SUMMA- COMPR- SP.GR. VALUE LIQ./ IDEAL GAS VALUE, DRY, BTU/SCF COMPRESSIBIL- TION ESS. F FRACT- FRACT- 1000 CAL. MOLE %, SPECIFIC (60F and 760 mm Hg) ITY FACTOR FACTOR RACTION ION. NUMBER NAME /100=X GRAVITY, G ,Н P STP. Z ,SQR b XSQR b X G 1 HYDROGEN 0 .0696 325.02 1.0006 0 0 2 PROPANE 1.406 1.5225 .982 2517.5 .1342 .00189 .02141 35.396 .38595 4 3252.7 .9696 .1744 4.6E-4 .00530 8.5871 .08609 ISO-BUTANE .264 2.0068 5 HYDROGEN SULFIDE 0 1.1765 637 .9903 .0985 0 0 .9667 .1825 5.8E-4 .00638 10.373 .09995 6 N-BUTANE .318 2.0068 3262.1 10 ISO-PENTANE .143 2.4911 4000.3 .9482 .2276 3.3E-4 .00356 5.7204 .05220 .9435 11 4009.6 N-PENTANE .105 2.4911 .2377 2.5E-4 .00262 4.2101 .03792 12 CARBON DIOXIDE .99432 .064 4.7E-4 .01112 .732 1.5195 14 ETHANE 4.83 1.0382 1768.8 .9916 .0917 .00443 .05015 85.433 15 OXYGEN 0 1.1048 .99927 .027 0 0 16 NITROGEN .0164 2.1E-4 .01223 1.264 .9672 .99973 17 METHANE 90.701 .5539 .9981 .0436 .03955 .50239 915.81 1009.7 19 0 3.4596 5502.8 .92 .283 0 0 20 C6 + .92 .238 2.9753 4756.2 .283 6.7E-4 .00708 11.320 .09760 21 0 2.9753 4746 .92 .283 0 TOTALS 100.00 .04883 .62223 1076.8 .75970

NOTES: Z=

.99762. IDEAL SPECIFIC GRAVITY OF MIXTURE =

.62223. REAL SPECIFIC GRAVITY OF MIXTURE =

.62346

IDEAL GROSS HEATING VALUE, DRY BASIS, PER SCF (60F & 760 mm Hg) =

1076.8. REAL GROSS, DRY HEATING VALUE = 1079.4

TO CONVERT EITHER THE IDEAL OR REAL DRY, GROSS HEATING VALUE TO SATURATED BASIS € STP, MULTIPLY EITHER BY 0.9826. THE VALUES AND CALCULATION METHODS USED IN THIS REPORT ARE THOSE GIVEN IN GPA PUBLICATIONS 2145-82 AND 2172-76.

RESPECTFULLY SUBMITTED.

CARLON C. CHAMBERS, P.E.

PRESIDENT

(b)

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING 3 TRIAD CENTER, SUITE 350 SALT LAKE CITY, UT 84180-1203

### REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Nu	mber State No. 1	6-12		,		
Operator Lone	Mountain Production	Company Ad	dress P.O.Bo	x 3394, Billir	gs, MT 59103	
Contractor Ve	co Drilling Company	<u></u> Ad	dress P.O.Bo	x 1705, Grand	Junction, CO 8	B1502
Location SW	1/4 SW 1/4 Se	c. <u>16</u> T.	16S R.	26E County	Grand	
Water Sands						
Dep	th	Volume		<u>Quality</u>		
From	To F1	ow Rate or H	ead	Fresh or Sa	lty	•
1. No measural	ble water encounter	ed.				
2. Several dar	np sands in Mesaver	de and Castl	egate.			
3				)		
4						
5	(Continue on	reverse side	if necessar	ry)		
Formation Tops	Mancos Dakota Silt Dakota Sand	1472 (- 4767 (- 4832 (-	+5117) +4918) +1623) +1558)			
• •	Morrison eport on this form conservation Genera	as provided	F1381) for in Rule	e 806, Oil and	Gas	

If a water analysis has been made of the above reported zone,

please forward a copy along with this form.

(b)

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING 3 TRIAD CENTER, SUITE 350 SALT LAKE CITY, UT 84180-1203

### REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number	er State No. 1	16-12				
Operator Lone Mou	ntain Production	Company	Address P	.0.Box 339	4, Billings,	MT 59103
Contractor Veco	Drilling Company	<u>,</u>	Address P	.0.Box 170	5, Grand June	ction, CO 8150
Location SW 1	/4 <u>SW</u> 1/4 Se	ec. 16	T. 16S	R. 26E	County Gra	and
Water Sands						
Depth		Volume			Quality	
From	To F1	ow Rate o	r Head	Fre	esh or Salty	
1. No measurable	water encounter	ed.				<del> :</del>
2. Several damp	sands in Mesaver	de and Cas	stlegate.			
3					,	
4				· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
5.						
	(Continue on	reverse si	de if nec	essary)		
Formation Tops	Castlegate Mancos	1273 1472	(+4918)			
Remarks	Dakota Silt Dakota Sand Morrison	4767 4832 5009		,		
•	ort on this form		ded for in	Rule 806,	Oil and Gas	•

If a water analysis has been made of the above reported zone, please forward a copy along with this form.

#### SUBMIT N TRIPLICATE: (Oth_astructions on reverse side)

## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING

	DIVISION OF OIL					5. LEASE DESIGNATION	AND BERIAL NO.
	5.7.0.0.0.	,,,				ML-29608	
	Y NOTICES AN				reservoir.	6. IF INDIAN, ALLOTTI	BMAN RUIST RO BE
1.						7. UNIT AGREEMENT N	AMB
Watt   Watt	OTHER						wa
2. NAME OF OPERATOR						8. FARM OR LEASE NA	
Lone Mountain P	roduction Compa	าง				State	
3. ADDRESS OF OPERATOR		2004	0:11:	- M		16-12	
	uilding, P. O. I					10-12	OR WILDCAT
4. LOCATION OF WELL (Report See also space 17 below.)	rt location clearly and in	TCCOLGTEGS A	ica say atste	seda tse <b>men</b> c	1.5	San Arroyo	
At surface	FSL, 596' FWL S	ection 16	;			11. asc., 2., 2., M., 08	DLE. AND
1213	13L, 330 THE 3		•		•	SEA SO TEVEDS	<b>!</b> ▲
						SW1SW1 Sec. 1	
14. PERMIT NO.	IS. BLEVAT	ons (Show wh	ether OF, RT, G	i, etc.)		12. COUNTY OR PARIS	ı
43-019-31243	6379	' GL, 639	90' KB			Grand	<u> Utah</u>
16.	Check Appropriate I	Pax To Indi	cate Nature	of Notice	Report, or C	Other Data	
	CE OF INTENTION TO:	,02 ,0	1		PEREN	UBNT ABPORT OF:	
			٦			REPAIRING	WELL
TEST WATER SHUT-OFF	PULL OR ALTE		-	WATER SHI	REATMENT	ALTERING	<del></del>
FRACTURE TREAT	MULTIPLE COM	IPLETE -	-		R ACIDIZING	MNOUNAEA	ENT*
SHOOT OR ACIDIZE	ABANDON*		┥	(04)	Status R	eport	X
REPAIR WELL	CHANGE PLAN	` <del> </del>	-		: Report results	of multiple completion letion Report and Log for	os Weil orm.)
(Other) 17. DESCRIBE PROPOSED OR CO	MOLETED DESERTIONS (Cle	arly state all :	pertinent deta			lockeding estimated da	te of starting an.
proposed work. If we nent to this work.)	MULETED OPERATIONS (Cle- il is directionally drilled.	give subsurfs	ice locations a	nd measured	and true vertic	er debtus tot an marke	16 and annie per
Drilled 6½" hol 175 sacks 10-0	e to 5310'. Ra thixotropic.	n 4½", 1	1.6#, J-!	55 casin	g to 5210'	. Cemented wi	th .
Rig released at	2:00 A. M., Ju	ne 25, 19	987.				
 Log Tops:	Castlegate	1273'	(+5117	')			
Log Tops:	Mancos	1472'	(+4918	- T			
	Dakota Silt	4767'	(+1623	-			
	Dakota Sand	4832'	(+1558				
	Morrison	5009'	(+1381				
n to start completi	on about July 6	, 1987.			DECI	ENVEM.	
					JUN	29 1987	
						SION OF	
					UIL, GA	S & MINING	
18. I hereby certify that the	. () [ —		Petr	oleum Er	aineer	DATE Jun	ne 25. 1987
SIGNED JAMES	10. 15 Million	TITI	E		.3111001		
(This space for Federa	or State office use)					•	
/ = = + = - = - = - = - = - = - = - = - =	,						

TITLE _

APPROVED BY COMMITTEE S OF APPROVAL, IF ANY:

DATE __

### STATE OF UTAH (Oth.) DEPARTMENT OF NATURAL RESOURCES

SUBMI"	N TRIPLICA	H.
	_astructions o	rt
Γŧ	verse side)	

DIVISION OF OIL, GAS, AND MINING	5. LEASE DESIGNATION AND SERIAL NO. ML - 29608
SUNDRY NOTICES AND REPORTS ON WELLS  (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  Use "APPLICATION FOR PERMIT—" for such proposals.)	6. IF INDIAN, ALLOTTER OR TRIBE NAME
	7. UNIT AGREEMBNT NAME
WELL WELL X OTHER  2. NAME OF OPERATOR	8. FARM OR LEASE NAME
Lone Mountain Production Company	State
3. ADDINGS OF OPERATOR	16-12
408 Petroleum Building, P. O. Box 3394, Billings, Montana 59103  4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*	10. FIELD AND POOL, OR WILDCAT
See also space 17 below.) At surface	San Arroyo
1215' FSL, 596' FWL Section 16	11. sec., T., B., M., OR BLE. AND SURVEY OR AREA
	SW\(\frac{1}{2}\)SW\(\frac{1}{2}\) Sec. 16-T16S-R26E
14. PERMIT NO.   15. BLEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISM 18. STATE
43-019-31243 6379' GL, 6390' KB	Grand Utah
16. Check Appropriate Box To Indicate Nature of Notice, Report, or (	Other Data
NOTICE OF INTENTION TO:	UBNT ABPORT OF:
PULL OR ALTER CASING  PRACTURE TREAT  SHOOT OR ACIDIZE  ABANDON®  CHANGE PLANS  (Other)  17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent defails, and give pertinent dates proposed work. If well is directionally drilled, give subsurface locations and measured and true vertice near to this work.)  Drilled 64 hole to 5310 Ran 42 11.6#, J-55 casing to 5210	s of multiple completion on Well letton Report and Log form.) , including estimated date of starting any al depths for all markers and zones perti-
175 sacks 10-0 thixotropic.  Rig released at 2:00 A. M., June 25, 1987.	. Cemented with
Log Tops: Castlegate 1273' (+5117')  Mancos 1472' (+4918')  Dakota Silt 4767' (+1623')  Dakota Sand 4832' (+1558')  Morrison 5009' (+1381')	
Plan to start completion about July 6, 1987.	
	29 1987
	VISION OF AS & MINING



### ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL SITE GEOLOGY - MUD LOGGING-

Dulg

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

June 26, 1987

Lone Mountain Production Co. P.O. Box 3394 Billings, Montana 59103

RECEIVED

JUN 29 1987

DIVISION OF OIL, GAS & MINING

13-019-31243

Gentlemen:

Enclosed is the final log on your Quinoco State #16-12 well, located in Section 16, T16S, R26E of Grand County, Utah.

We appreciated the opportunity to serve you. If we can be of any further assistance in the final evaluation of zones encountered, please feel free to call on us.

We are looking forward to working with you again in the near future.

Sincerely,

Andy Kelley President

AWK/11f

ENC:

2 FINAL LOGS

XXC:

2-QUINOCO, DENVER

2-SONAT EXP., DENVER 2-DIV. OIL & GAS, SLC

1-SUEK OIL, NORTHGLENN

1-B&H RESOURCES, BILLINGS

1-ROBERT BALSAM, BILLINGS

1-JOHN & MARY BAROVICH, BILLINGS

1-WILLIAM BUNIGER, LOMA

1-S.A CHORNEY, DENVER

1-NEIL FEHRINGER, BILLINGS

3-J & L OIL & GAS, BILLINGS

3-T.H. MC ELVAIN, SANTA FE

1-MONTANA & WYOMING OIL, BILLINGS

1-JACK C. ROUTSON, LARAMIE

1-DR. BRIAN GAMBLE, CANADA

1-D & G ROUSTABOUT SERVICE 1-HAROLD HOLDEN, BILLINGS

3-SONAT EXP., HOUSTON + 1 SEPIA

DUPLICATE COPY

### **BIT RECORD**

WELL NAME: QUINOCO STATE #16-12	ELEVATION: 6390 KB 6379 GL				
CO. NAME: LONE MOUNTAIN PRODUCTION CO.	SECTION: 16, T16S, R26E				
CONTRACTOR: VECO RIG# 2	CO. & STATE: GRAND CO., UTAH				
CDUD DATE: 6-19-87	T.D. DATE: 6-24-87				

SPUD	DATE: _	6-1	9-87			T.D.	DATE:	6-24	-87			<del></del>
			BIT REC	ORD				F	T PER/DA	Y	DEVIA SURV	TION /EYS
RUN	SIZE	MAKE	TYPE	XXX	FTG	HOURS	FT/HR	DATE	DEPTH	FT	DEPTH	DEV.
1			M44NG	α	191			6-22	on locatio	n		
2		STC	F-3	191	1509			6-23	3478	1574		
3		STC	A-3	1700	1309	16.5	79.3	6-24	5052			_
4	· .	HTC	J-33	3009	2301	31.25		T.D.	5310			
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	<u> </u>			<u></u>	<u> </u>	<u></u>		<u> </u>	L	<u></u>		

### **DEVIATION SURVEY**

COMPANY NAME:	LONE MOUNTAIN PRODUCTION	N COUNTY:
WELL NAME:		STATE:

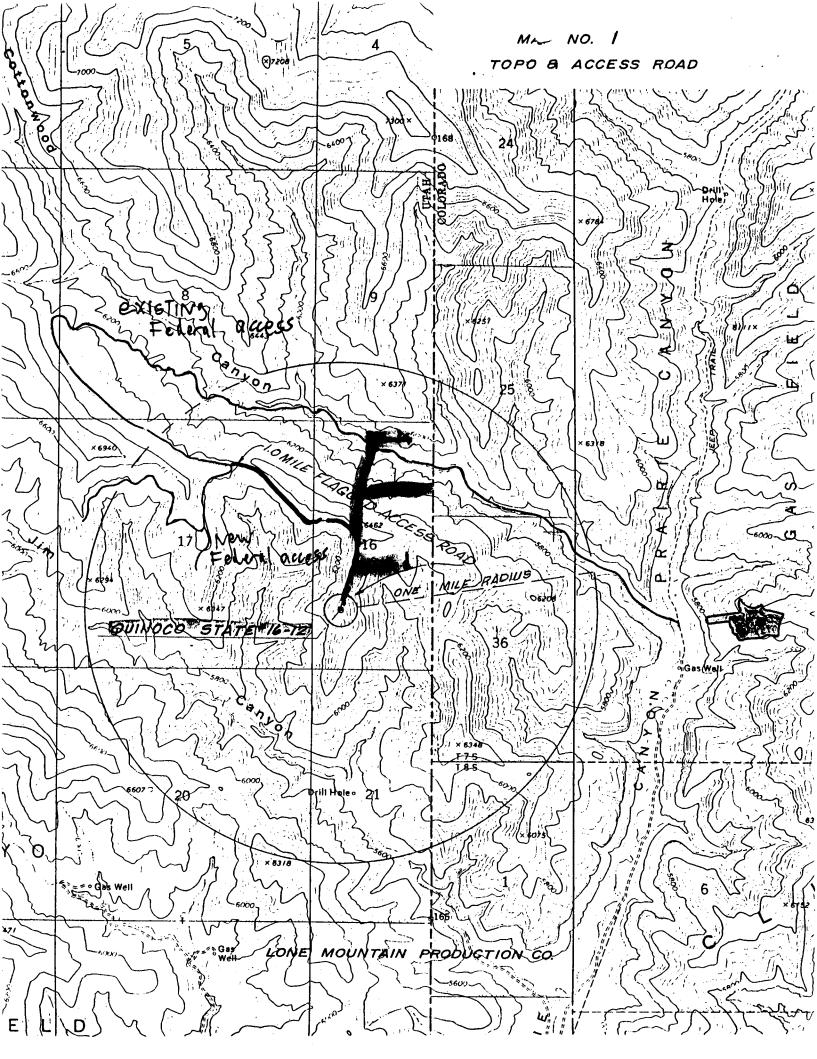
DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.
192	1/2		·					· · · · · · · · · · · · · · · · · · ·
717	2							
1206	2							
1700	1							
2210	1				· · · · · · · · · · · · · · · · · · ·			
2711	1							
3207	3/4							
3707	1 1/2						<del></del>	<u> </u>
4269	2 1/4							
4720	3 1/2							
5310	4							
	<u> </u>							
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	<del> </del>							
			<u></u>			<u> </u>		

### STATE OF UTAH

SUBM. CTRIPLICATES (Other instructions on reverse side)

DEPART	MENT OF NATURA	L RESOUR	RCES	5. LEASE DESIGNATION	
DIVISIO	ON OF OIL, GAS,	AND MINI	NG	ML-29608	AND BERIEF NO.
2111221112				6. IF INDIAN, ALLOTTE	OR TRIBE NAME
SUNDRY NOT	ICES AND REP	ORTS O	Y WELLS	·	
(De not use this form for propos Use "APPLICA	TION FOR PERMIT—"	(or sacy blob	t to a different reservoir.		
I. OIL MAR M				7. UNIT AGREEMENT N.	ĀMB
WELL WELL COURSE	····			S. FARM OR LEASE HA	w 1
2. NAME OF OPERATOR	Commanu			State	
Lone Mountain Production	Company	<del></del>		9. WELL NO.	
408 Petroleum Bldg., P.O	. Box 3394. Bi	llinas. N	IT 59103	16-12	
4. LOCATION OF WELL (Report location c				10. PIELD AND POOL, O	WILDCAT
See also space 17 below.) At surface				San Arroyo	
1215' FSI	596' FWL; Sect	ion 16		11. 88C., T., E., M., OB	BLE. AND
1213 132,	JOO I ML, JEC	.1011 10		SWłSWł Sec. 1	6. T165-D26E
	15. BLEVATIONS (Show			12. COUNTY OR PARISO	
14. PREMIT NO.	Grand	Utah			
43-019-31243	6379' GL,	6390' KB	·	U alla	<u> Utali</u>
16. Check Ap	opropriate Box To Ir	idicate Nat	ure of Notice, Report, or	Other Data	
NOTICE OF INTER	ITION TO:	1	#UB##	QUENT REPORT OF:	_
TEST WATER SEUT-OFF	PULL OR ALTER CASING		WATER SHUT-OFF	REPAIRING	WELL
<del>  </del>	MULTIPLE COMPLETE		FRACTURE TREATMENT	ALTERING C	DAISA
SHOOT OR ACIDIZE	ABANDON*		SHOUTING OR ACIDIZING	ABANUONME	NT*
REPAIR WELL	CHANGE PLANS		(Other) Report resul	ts of multiple completion	on Well
(Other) Lay Pipeline of	on Lease	X. I	Completion or Recom	its of multiple completion appletion Report and Log for	rm.)
17. DESCRIBE PROPOSED OR COMPLETED OF proposed work. If well is directly	ERATIONS (Clearly state a onally drilled, give subs	ill pertinent o urface location	lefulis, and give pertinent date is and measured and trile vert	ical depths for all marker	s and zones perti-
nent to this work.) *					
Lone Mountain Production steel line to connect the will be on Lease ML-29608  The line will be coated, 1700 feet, and will be a the line route.	e State No. 16- 3, which consis wrapped and bu	12 into ts of al	a Northwest Pipeling of Section 16. the existing access	ne Lateral. All s road for appro	construction eximately
Archaeologicalclearance i portion of the line has a					
•					
				•	
18. I hereby certify that the foregoing	is true and correct	Ja	mes G. Routson,		
() com on D=	1100		troleum Engineer	DATE6	/30/87
SIGNED	<del></del>		•	ED BY THE ST	ATE
(This space for Federal or State of	Mce use)		APPROV	CO DI ILE SI	OF:
APPROVED BY		ITLE	<u> </u>	AH DIVISION ( AS, AND MINI	NG
CUMPIAL IS OF APPROVAL, IF	ANT:		DATE:Z	1.87	
			DAIE	al Signed by John R. Baz	:a
•			o Pelj	بعائد والصليفة فيلتها أأورار أواله فأنها المصلا والمنطق أراعطانها أنطاقها أرفور يوارو	Jan Mil

*See Instructions on Reverse Side



### DESIGNATION OF OPERATOR

State of Utah The undersigned is, on the records of the MONOMON NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAMED NAME

DISTRICT LAND OFFICE:

Division of Oil, Gas & Mining

SERIAL NO.:

ML 29608

and hereby designates

NAME:

Lone Mountain Production Company

Address: 408 Petroleum Building, P. O. Box 3394, Billings, Montana 59103

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 16 South, Range 26 East

Section 16: Lots 1 thru 4, Waw (All)

Containing 297.76 acres, more or less Grand County, Utah

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

QUINOCO OIL AND GAS INCOME PROGRAM 1983-2,

1983-3, 1983-4

March 11, 1987

Box 378111, Denver, CO 80237

LOVERNMENT PRINTING OFFICE 16 -- 53598 3